BEFORE THE WATER POLLUTION CONTROL
ADVISORY COUNCIL (WPCAC)

TRANSCRIPT OF PROCEEDINGS

Heard at Room 111, Metcalf Building
1520 East Sixth Avenue
Helena, Montana
August 19, 2011
10:00 a.m.

ACTING CHAIRMAN TREVOR SELCH; MEMBERS
EARL SALLEY, KATHLEEN WILLIAMS,
RICHARD HOEHNE, ROGER MUGGLI, KAREN BUCKLIN
SANCHEZ, MICHAEL WENDLAND; and
COREY FISHER (By telephone)

PREPARED BY: LAURIE CRUTCHER, RPR
COURT REPORTER, NOTARY PUBLIC
P.O. BOX 1192
HELENA, MT 59624
(406) 442-8262

WHEREUPON, the following proceedings were had:

* * * * *

CHAIRMAN SELCH: With Corey on the phone, that gives us our quorum. We're going to get started. We've got some people showing up late, and calling in late here, so I'll call the meeting to order here at 10:04.

Our first item would be the approval of the agenda from our meeting on April 14th. Sorry. Our current agenda actually. And we talked about moving a few things around, but I think the last thing we decided was to just kind of keep it as we go and modify it as we need to. Does anyone have any additions to the agenda? That would be a motion to approve the agenda.

MR. SALLEY: So moved.

MR. WENDLAND: Second.

CHAIRMAN SELCH: Second. Passed. Then our minutes from our April 14th meeting. I managed to just skim through them last night, and I didn't have any major changes or anything like that that I could see. Does anyone have any changes to the minutes from our April 14th?

MR. WENDLAND: Move we accept the

minutes.

MS. BUCKLIN-SANCHEZ: I second.

CHAIRMAN SELCH: Hearing second. So I move this on to our first action item, our one and only action item for this meeting, which is the DEQ4. And we have Barb and Steve that are going to present that to us.

MR. KILBREATH: I'm not quite sure where you want us to stand, so we'll just take over some part.

I'm Steve Kilbreath, and I'm the program manager for DEQ's Subdivision Section, and Public Water Engineering Program. Barb Kingery is one of the staff engineers in the Subdivision Program, and Barb has been here six years.

MS. KINGERY: Something like that, yes.

MR. KILBREATH: And I have the dubious distinction of being the Subdivision Section Head for the longest period of time since Ed Casne. So people who have my job last fourteen months, there is usually an ambulance and a 911 call, and they get a new supervisor.

MS. KINGERY: And we're so lucky to have you.

MR. KILBREATH: And so what we thought

we'd do is I'd start with saying to you guys what is DEQ4. And DEQ4 is the design standards for onsite wastewater systems in the State of Montana.

DEQ4 came to being in the year 2000. DHES and DEQ reorg'ed in 1995, and DEQ came into being; and DHES had designed circulars that were called the WQB's, and so the water quality circulars, they were circulars for individual septic systems, multi-user systems, experimental systems, and bigger ones, so there was about three or four, and you probably remember them, three or four of those.

They kind of got morphed into DEQ2, which is the big municipal standards, and DEQ4, which is onsite standards.

Why are these important? These control the design of all onsite wastewater systems in Montana. Title 50, which is the powers and duties of the local health officers, gives the county sanitarians the ability to write septic permits for sewage coming out of buildings, private buildings. They pick up DEQ4 as their design standards, so every county sanitarian in this state uses DEQ4 in their day-to-day work.

The Subdivision Section uses DEQ4 to

have all onsite systems meet the same standards during a subdivision review process, and the Public Water Supply Section uses DEQ4 for design standards for all public wastewater systems that aren't municipal. So DEQ4 is the design standard that everybody uses in the state of Montana.

MS. KINGERY: So that means everybody, even in Helena, Montana and everybody in Sidney, Montana, you know, or Plentywood, Montana, you know, all the gamut. So we have these great big municipalities that this might be a part of, and we have these little tiny deals. So when we write those standards as statement of standards, we have to keep all those counties in mind because it's quite a different world, where you land.

MR. KILBREATH: I get a call once in a awhile from Walt McNutt in Sidney who says, "You all have really big rules for really little projects." And so, you know -- So Barb is right. It's got to apply across the state.

In 1996, Mark Simonich, the Director at DEQ, directed Bonnie Lovelace to form a task force and develop a new circular. The task force was formed, and between the period of 1996 to 2000, they developed a subdivision task force and a

nondeg task force. Out of the subdivision task force they revised subdivision rules. They came up with the revisions to the WQB's to create DEQ4, and they came up with current nondegradation rules as it applies to subdivisions. So there was quite a busy period in there.

And our present DEQ4 was adopted in 2004; it was changed and modified in 2000, it was adopted; it was modified in 2002.

MS. KINGERY: And then in 2009, we added a chapter, gray water, to it. So essentially we're working off the 2004.

MR. KILBREATH: Two or four.

MS. KINGERY: Yes, with that one little chapter added in, is what we're doing.

MR. KILBREATH: And so when we sat down to do this, we felt it was important on a five year, projected five year basis, to review standards, get current, get with what everybody else is doing.

We should have done this a few years ago, but a few years ago, the entire world was upside down in Montana. We had nine FTE in the Subdivision Section. We had 10,000 lots a year coming in the door. You couldn't find the door,

you couldn't find your desk because of the submittals. We were too busy to work on the standards. And it was during that time that you saw the holes and flaws in the standards, when you're just buried and everything is happening.

Since then the economy has gone the other direction. We've laid off the vast majority of subdivision employees. We have the other problem now, in that we have 1,500 total lots in the state, and we've got two people, two employees left. So we've been on this roller coaster. And we started working on DEQ4 when we were coming off of the hill, and we think we've hit the bottom, and we're about ready to -- it is a really good time because it's slow. It's a good time to work on the standards.

Barb and I sat down and said, "Now, how do we do this?," because the way the process has been in the past, has been through a task force, and a task force is a really good idea because it gets outside people and interested parties.

And the subdivision task force, the DEQ4 task force, started out with this many people representing this much stuff; and as it ground on, and on, and on, and on, it ended up with

about five counties being at the table, and one engineer, and one tank representative.

And so the standards got driven by the big counties because they were the ones that showed up. So things that worked in Missoula really well are in our documents, and therefore the calls from Walt McNutt. Therefore, you get the small county stuff.

So we've tried to incorporate that. We did a different approach this time. So I'll let Barb talk about this approach.

MS. KINGERY: And some of the reasons we did this approach also were we saw -- within the document, we saw some conflicts between our rules in different groups of DEQ, and some inconsistencies, technical inconsistencies, that were going on.

The other thing that we saw often were -- We would get those calls from vendors who would say, "I'd like you to please certify my product in Montana. I want to be on the approved list," and we say, "We don't have an approved list."

MR. KILBREATH: You go to Washington or other states, you can open up their internet site, and they'll have a list of things, a list of

additives that are approved, they've got a list of effluent filters, and a list of poly tanks, you know, etc., etc., because they have staff enough, and they have people that are just reviewing those technical standards, and they just write you an approval to use your product.

MS. KINGERY: Right. So we had all this sort of mulling around in our minds, and what we decided to do was we would form together a small select committee of people, and on that committee we would have different people from DEQ who would represent different bureaus within our department; we would have consultants who would deal with primarily different sort of vendors and that kind of a thing; and then we thought we would include county sanitarians because they also use these in their Title 50 permits.

So we had a group of about a dozen people, and they were hand selected ones, trying to get representation from different parts of the state, and different points of view, and we had this group of 12. And what we did is we assigned a chapter or a section to small committees within that group of 12; and so on each chapter we had one DEQ representative, one person from the

industry, and one county sanitarian. And the three people worked together on each chapter, and they developed, and changed, and modified as they wanted as a small group.

We then came back to our group of 12, and reviewed as our group of 12 everything that that small group had put together, modified, and changed, did that kind of stuff, and came out with this master draft document.

At that point, then we thought, okay, so now we've had a kind of a select group here; we've received their comments; let's take this out to a little bit of a -- let's expand just a little bit more, because like I said, our first group was very hand selected.

And so we started what we called stakeholder meetings that we held throughout the state, and we had three different ones -- one in Polson, one in Helena, and one in Billings -- and to that we invited anybody we could think of, and we had terrific turnout for all of them. And we had people from the realtors showing up, we had vendors showing up, we had people who have -- other sanitarians that weren't included in the list, we had the septic tank people showing up.

MR. KILBREATH: Barb had the septic tank guys show up in Billings, and they were talking about concrete ASTM standards. And if any of you guys have ever looked at concrete ASTM standards, that's like rocket science.

MS. KINGERY: Yes.

MR. KILBREATH: And they're bringing this stuff to the table, you know.

MS. KINGERY: Right. So it was a real positive thing, and great turnout. And so we sort of collected those comments, and put them together. And then we also, for those who couldn't make those meetings at the three different sites, we established a blog that we did, and this allowed people to comment on our blog, and could actually attend in person any of the stakeholders meetings.

And we had some good comment and discussion. About 40 comments showed up on the blog. And so what we did then, so we have all these comments from the stakeholders, we had the comments on the blogs, and what we decided to do then was, okay, so DEQ is in charge of this document. DEQ needs to be the one that takes all of these comments from all these different places,

pulls them in together, and puts them together in something that's over here. So that's what we have been working on as of late.

We sat down with people from the Water Protection Bureau, Legal, SRF, and our subdivision group, and we went through chapter by chapter, we discussed the comments that we had received, and came up with what you have in front of you.

So it's been kind of really a little bit of a different process from the original DEQ4, but one that I think worked very well. And hopefully our goal was to make a consistent document that would work for all points of view.

MR. KILBREATH: And we had such interesting issues with it, you know. If you look on the page that starts showing you the changes, and you look at New Definitions, and you look at the word "bedroom," well, heck, everybody knows what a bedroom is. In our rules, a bedroom is any room that can be used for sleeping.

Now, is your garage a bedroom? It is here in Sidney, Montana. There is no room to rent, and you've got parts in your garage that's separating, then your garage is a bedroom, you know. Is your kitchen a bedroom? Well, it could

be used for sleeping.

And this is such an interesting question. There is actually a case in the Supreme Court right now, Missoula County, defines bedrooms under these rules; told the lady that she had to up size her septic system because she added two bedrooms to it. Her house is in the flood plain. Incidentally here in the flood plain, you can't increase your septic system. They had to tear these two buildings down that DEQ built.

They went to District Court in Missoula County. District Court said Missoula County unconstitutionally defined the definition of the word "bedroom" in this particular case, and the lady can keep her buildings. And Missoula County appealed to the Supreme Court. So the Supreme Court has currently got an appeal from District Court on the word "bedroom."

Onsite septic systems are sized on the number of bedrooms providing people, providing flushes, and shower, and laundry; and so you'd think the word "bedroom" would be a simple word. There might be a more interesting definition when the Supreme Court gets done, but it's the little words like that in this that have really

interesting context, you know, when you get down to some of the fine points.

MS. KINGERY: Right.

MR. KILBREATH: You are being puzzled by that one, aren't you?

MS. BUCKLIN-SANCHEZ: I was just thinking. Why not design septic tanks like you design public water systems, based on the number of people in the household, rather than -- (inaudible) --

MR. KILBREATH: We've gone to that, Karen -- we've gone to that -- when you get a certain number of folks. So we're saying at ten homes or more, you design on 100 gallons per capita, two and a half people per house, because at ten homes, that all averages out. But what you don't want to do is two and a half people per house on a per capita, on an individual septic system, because then you'd end up with something that doesn't have any margin for error.

MS. BUCKLIN-SANCHEZ: Because these are individual onsites.

MR. KILBREATH: Because these are individual onsites, and the limit factor with those is the soil treatment, you know. You can

have a tank, you know, a septic tank, and one way or the other, a little over, a little under, the tank will function, but your drainfield and the hydraulic capacity of your drainfield will control what happens on that lot.

And if you miss it by 100 gallons -- which isn't anything to miss on a municipal system -- but on an onsite system, if you miss by 100 gallons, you're done.

So we went long and hard, back and forth, because we knew that at some point we were way over-sizing community systems by doing three and four bedrooms, and we see that in flow numbers, you know. You look at a subdivision in the Helena valley that has 140 homes, and it has got 150, 180 gallons a day average going through a flow meter, and bedroom sizes. So per capita works at the number, and we chose one, and time will tell if we're right or wrong.

MS. KINGERY: And those are exactly sort of the issues that we were receiving comments on from the public, and from designers saying, "You know, this old DEQ4 is so rigid. How can we make this work for all these kinds of systems?" And so we would have a two hour discussion on sizing,

that kind of thing.

MR. KILBREATH: If you make your tanks too big, you have seasonal residences that have advanced treatment, you've got a big tank that loses its heat, your advanced treatment doesn't work, the bugs don't live. So then small septic tanks.

So we've done sort of the gamut on the issues, and the issues, they get real technical. Everybody thinks an onsite septic system, anybody can do this, but you can't. They get real complicated.

The other issues we run into with onsite septic systems that get real complicated real quick are those same things that mess up municipal plans. How about RV's? How about recreational vehicles? You park your RV, you put your magic little chemical in your black water holding tank, and your magical blue chemical is a mixture of formaldehydes and things that stop the biological activity so your holding tank doesn't stink, and you fill that up, and you dump that in your septic tank that you've got to dump at home.

What happens to your septic tank? It suddenly becomes very upset. It's a natural,

living, biological thing, and if you dump the wrong things in it, you mess it up.

So what happens when you have a restaurant that has high grease, high organic material? High strength waste is something that was alluded to in DEQ4. We put a high strength waste chapter in. We're probably a long ways from the right answers on high strength waste, but at least we've got a starting point, you know.

High strength waste example. Steak house up out of Great Falls. Brand new steak house. Professional engineer designed onsite wastewater system. Four and a half months later, onsite wastewater system failed, flowing over into the road side ditch. They double the size of the onsite wastewater system, and eleven months later, they were both failed and flowing over into the onsite ditch. The reason for failure? Plugging with grease, and high organic loading.

So we have the same issues the big plants do. Maybe a little bit more dramatic in the small spots, you know, the small systems.

MS. KINGERY: One of the other issues and points of confusion with the old DEQ4 had to do with our sizing of drainfields and the

reductions that were in place there. And in our world, we deal with both onsite systems, and we also deal with the Water Quality Act, and with nondeg. And we do have a list of vendors that are approved for Level 2 systems. And what happened with that was if you were given a Level 2 certification, you were automatically given a reduction in your drainfield size.

Well, people didn't understand that there is two different sections. We have the nondeg section, and we have the DEQ4 standards section. And we tried real carefully in this draft we have in front of you to make the distinction between what you do for nondeg is for nondeg, and what you do for sizing your drainfield has to do with different components and different elements.

Nondeg would deal with nitrogen and phosphorus, and DEQ4 on your onsite system would deal with BOD, which is essentially the amount of organics in your waste stream, and TSS, total dissolved solids. So we deal with two different sets of criteria, and we were trying to be real careful with dividing those apart, and letting people know that just because you have one doesn't

mean you get another, making sure that they're understanding that. And so as coming out of that, we've sort of stepped into another world. Sort of brought us into something else.

MR. KILBREATH: Another hole in the road.

MS. KINGERY: Yes. There are many products out there -- not many -- but some that are beginning to present themselves that have NSF Standard 40 recertification. And what that means is they have gone through the NSR testing process to show that they can treat to a certain level of BOD and TSS.

And we have included in this draft in front of you provisions that they have made standard wording, that if they have a Standard 4 on their system, that for that reason, we give them a reduction in the drainfield size, not because they made a Level 2 list or anything like that.

MR. KILBREATH: You can go to our website, and there is a list of Level 2 systems, and Level 2 apply to nondegradation only; and the Level 2 systems all started off with a 50 percent reduction when they were designated, because

things like intermittent sand filters and recirculating sand filters were on those lists, those Level 2 lists, and they happen to do a really good job of BOD and TSS reduction.

And as we started getting new systems added to that, they were granted 50 percent reductions, and nobody looked at why. We did a data audit on our Level 2 systems two years ago, and lo and behold, we found that they were all doing really well on their nitrogen reduction, but BOD and TSS varied.

You know, we had one vendor that was getting about 10/10 on BOD and TSS; we had another vendor that was getting about 60 on BOD and about 20 on TSS; we had another vendor that was getting 30/30 you know; but they were all meeting their -- (inaudible) -- standards, until we were struggling with how do we deal with those existing guys that have this pile of systems out and in the ground with a 50 percent reduction, were talking to the counties trying to find out, "Do we have any of those with problems?"

And our gut feeling right now is the three major Level 2 providers in the state, two are the same company, just a different location.

Advantex (phonetic) is in Bozeman, and they have a configuration for their system that involves a recirc tank; and Advantex in Kalispell, they have a configuration that involves a recirc through the septic tank; and another company, I think they're in Three Forks.

And the two Advantex, one of them gets 10/10 because it goes through a recirc tank. The one that goes through the septic tank is 30/30. The one that goes through the septic tank gets better nitrogen reduction.

One of our big issues with this NSF 40 reduction thing will be how do we treat those existing guys with fairness, with fairness and without attorneys.

MS. KINGERY: Another big issue -- and this was more of a comment from the public that we received -- was that the old WQB's way back in the early 1990s had pictures which made things much easier to understand, and so they asked if we could please bring the drawings back to the circular.

And you'll notice that there are quite a few drawings, and design examples, and different kinds of things like that, which we try to bring

back in to make a little -- you know, I'm a real visual person, and I do a lot better with pictures than I do with words, so to just try and make it a little more user friendly.

And another comment we received was format. This is a new format for it. We kind of divided things into chapters, tried to group like systems together. We also added, as part of the format change, sections of another circular in DEQ2, which was a comment also from the public that, "We're so confused. Sometimes I get the note to go to DEQ4, sometimes I have to go to DEQ2 on larger systems. What do I do with that?"

And so we took the relevant sections out of DEQ2, which is a design circular that deals primarily with larger public municipal -- public systems, and brought those into this document.

MR. KILBREATH: If you had a community wastewater treatment system that was a DEQ4 style system, like a recirc system, recirc filter to drainfield, but you happen to put solids transport and a lift station in to go into a central septic tank, this septic tank, and this recirc filter, and drainfield were covered under DEQ4, this solid collection systems and pumping system were covered

under DEQ2, and it really made a mess when you were trying to sort out standards, and design, and "who's on first" kind of stuff, you know.

MS. KINGERY: So hopefully now if you are treating your wastewater subsurface -- which is what the DEQ4 is -- this will be where you go. This will be the document, no matter if it's a mom and pop, or a large system that goes to the large community drainfield. And we deal with all sizes, so we've got --

MR. KILBREATH: And we brought file examples. This is a mom and pop subdivision file from Broadwater County, where the homeowner designed, did their subdivision, and they followed DEQ4 for their soils work in their submittal. And you notice they've got a nice hand drawn lot layout, you know. And so that's a program. A program decision is our decision --

Our program, we have different levels of files that require an engineer or don't require an engineer. Small projects attempt to -- Some people attempt to do them themselves. So we have to have a document that works across the board; whereas we have a file like this that will be a recirc filter for 32 homes designed by a

professional engineer, and you can see the complication you get into, the details of drawings. All of this is spelled out in DEQ4. DEQ4 applies to this, and it applies to mom and dad doing their own system, you know.

So we run the gamut of size of projects, and we run the gamut of -- I hate to use the word because I got in trouble the last time I used the word -- competency of people submitting.

MS. KINGERY: Experience maybe.

MS. BUCKLIN-SANCHEZ: I doubt that.

MR. KILBREATH: I used that word in front of the Board of Professional Engineers, and they didn't like it.

MS. KINGERY: So another thing. So as time develops, of course, new technologies come on line, and everybody has a new magic box to do things with. So this DEQ4 also tried to incorporate some new technologies that we're seeing out there. We're including provisions for subsurface drip systems, which is a different configuration you can use for treatment. We're including provisions for poly tanks, poly septic tanks.

Some of this was sort of touched on

before in the old DEQ4, but just so briefly that it really had -- it was ineffectual for it. So we did that. And then also for composting toilets and incinerating toilets that we call our waste segregation systems, we've also included technologies for that.

MR. KILBREATH: As a result of gray water legislation in the last two legislative sessions.

MS. KINGERY: Right. We saw that if gray water was going to be used often, it would be used with composting toilets. That's just the way that the Legislature structured.

So that's kind of, just in a real brief nutshell, kind of what we tried to look at, and where we tried to go with this document.

Now, we have many steps ahead of us here.

MR. KILBREATH: Lots of steps.

MS. KINGERY: Yes. This has been such a great learning process. We're hoping eventually to go to the Board of Environmental Review. I imagine, because this is quite a change -- and like Steve said, it's been since 2002 essentially since we've done this -- that we will want a

longer comment period for that formal process.

And we also have our blog still going, although we need to send out a new announcement saying, "Hey, you guys," you know. The blog had kind of received all the comments on that very first initial document. They haven't -- (inaudible) -- the difference being this is what came out of the DEQ assembly of all the comments from the blog and from the stakeholders. So as soon as we can get that notice out there, we're going to -- (inaudible) --

MR. KILBREATH: The other one that we passed around, this is a lot by lot. This is a Fort Peck cabin site transfer, and this is the detail that's going into each lot. Each lot that's being transferred by Army Corps is putting this kind of detail into each lot, so each owner of the lot has a septic system, a place to replace their septic system, and meets all current standards. So just an example of -- this is all the detail that comes out of DEQ4. So --

MR. HOEHNE: Do a lot of these smaller communities have a combination of surface treatment and surface lagoons and stuff, or this is mainly just personal or small business type.

MR. KILBREATH: This is mainly small. We'll see new subdivisions come in that are covered under DEQ4. We have an application right now for a 108 lot subdivision in the Helena valley that has septic tanks, gravity septic tank collection -- no, that's not a septic tank. It's got a DEQ2 system, it's got an SBR, so it's got a municipal type wastewater treatment system for the subdivision; and then a soil area to get rid of the effluent.

So mainly you start getting 100, or 200, or 300 folks on a subdivision, you tend to get in a technology that's not in DEQ4. You tend to go to a higher mechanical treatment type system. I'm trying to think of the biggest one. Jenny, can you think of the biggest things we saw that would have a discharge permit that would be DEQ4 systems?

They would have been -- you know, that thing at Yellowstone Mountain Club, it had Advantex systems, but the Advantex systems went to a lagoon, and the lagoon went to spray irrigation for a golf course.

What happens when you get bigger systems is you tend to find something else for the

effluent. You tend to find a reuse for it, spray irrigation; or if you're going to put it in the ground, you need to do a higher treatment, and put it in a rapid infiltration mechanism just to get rid of it, because drainfields get to be really big. So you tend to -- these systems, 100 lots, sometimes maybe as high as 200, but that's really pushing it. But lots of times, they're all covered one individual and up to 20 or 30, you know.

MS. KINGERY: I read some statistics somewhere that said that maybe 40 percent of the systems in Montana were onsite systems, or 40 percent of the households were onsite systems.

MR. KILBREATH: Yes, individual wells and -- (inaudible) --

MS. KINGERY: If you're not within the city of Bozeman, you're probably not on a septic system.

MS. BUCKLIN-SANCHEZ: I'd like to say I think it's critical to upgrade these standards, but I'm curious also what you would say is the most problematic area in the current design standards. I see for example that you've deleted at grade.

MR. KILBREATH: Nobody uses at grade. People use elevated sand mounds or shallow drainfields. We haven't seen an at grade come through in years, so we said, "Why have it in there?"

MS. KINGERY: And the old at grade system was kind of interesting, in that I'm not quite sure what went on with how they did that particular standard for that one, but it required that you have a drainfield that's one and a half times normal size.

MS. BUCKLIN-SANCHEZ: It said 1.5. I just saw that in there.

MS. KINGERY: Yes. And so why would somebody do an at grade that's going to be one and a half times bigger than an elevated sand mound or a shallow cap one. It didn't make sense, so we just didn't see it.

MS. BUCKLIN-SANCHEZ: You see a lot of mounds.

MS. KINGERY: You do see a lot of mounds.

UNKNOWN WOMAN SPEAKER: So what's the most problematic -- (inaudible) -- currently that causes --

MR. KILBREATH: I would bet right now the fact that there is nothing in current DEQ4 -- or there is. It says, there is a clause in the front of DEQ4 that says in order to discharge to a DEQ4 system, you must have residential strength waste. And so what does that mean? You know.

I've got letters from professional engineers that says, "My pizza parlor, sandwich shop, and coffee shop will have waste no different than a three bedroom house," and it was like, "Yeah. No way." You know? High strength. High strength is a real issue with us. High strength waste causes drainfields to just prematurely die. I mean they just -- you know.

A properly sized, properly maintained septic tank and drainfield system that has the reasonable strength waste should have a life span of 15 to 30 years, you know.

MS. KINGERY: So as part of that, so just another sort of problem that we would see, so we have to have residential strength waste, and that's in one section of DEQ4; and then if we step to another section, it gives us loads, what kind of loads we can expect from a restaurant, from an RV, from a -- you know, this area, you know. I

mean just all these things that would contribute high strength waste.

So we have one section that tells us what we can expect for our flows, and our other section that says, "You can't put that in here." So you know, working through different kinds of projects, you just find things like that, and calls on the telephone, "Well, if you tell me how to design it, how to size it, why does it mean I can't put it in here?" (Inaudible) So we needed to sort of address those early.

MR. KILBREATH: In the body of the document, on Page 28 and 29, these tables that say "float," these tables are 300, 400 years old. When did you first start seeing them, Karen? These things are old, you know.

MS. KINGERY: But they are from EPA, and you know, and they are still, you know, sort of have the EPA stamp of approval, so --

MS. BUCKLIN-SANCHEZ: They're used for design of public -- (inaudible) --

MS. KINGERY: Yes, they are.

MR. KILBREATH: So we find ourselves, much to the dismay of the consultant, we find that us sending them to like the local city water

departments. If they're doing a bar/restaurant/gas station outside of Helena, we'll send them to the City of Helena to get the water meter records for Monroe's High Country Travel Stop over here, and say, "You're proposing something like this. Go find out what these guys are doing to get gallons per day."

MS. KINGERY: I just had a call yesterday from somebody that said, "I need some help. I need to put in a grease trap. What do I do about grease traps?" And we do mention it in DEQ4 that you should have a grease trap if you're on something like a kitchen, a public kitchen; but no information on how to size it, what they look like, any of that.

So in that particular case, what I did is I said, "Okay. I have a draft, you guys. It says, 'draft' across the section of the DEQ4. I'm sending it to you. Look at it, know it's a draft. It will help you size what you're putting in."

MR. KILBREATH: We try to get the things that we commonly see and put them in here. We even put in a drawing.

MS. BUCKLIN-SANCHEZ: What comments have you gotten from sanitarians? One comment I would

expect would be "thank you," because this helps us.

MR. KILBREATH: You know what they'll do, Karen, is they'll take and they'll put this page in the xerox machine and hand it to them with a permit and say, "Do this."

MR. HOEHNE: So essentially this would -- any new construction or any failing system that gets replaced would have these requirements, but anything else would be grandfathered in at this point.

MS. KINGERY: Right.

MR. KILBREATH: Once this becomes effective, it would be easy to start from this point forward.

MS. WILLIAMS: Question, please. I have a couple questions. It seems like the high end residential strength is a pretty important term in here. You guys you know your document better than I do. But should they be in the definition section?

MS. KINGERY: Residential strength I believe is --

MR. KILBREATH: It's in there.

MS. KINGERY: You know, I speak, and

then I need to make sure.

MS. BUCKLIN-SANCHEZ: Page 12 has high strength waste definition.

MS. WILLIAMS: Oh, I missed it. Sorry. Thank you. Okay. And then I didn't know if it would belong in this or not, but the restriction on the mixing zone not extending beyond the property line.

MR. KILBREATH: Not a design criteria. We have a rulemaking process that's open right now that is going to -- the Department rules to pick up that House Bill 28 requirement, and we'll do that in the subdivision rules.

MS. WILLIAMS: Okay. And a curiosity question on my part is: Are people putting in composting toilets? And I've never heard of a -- what was it called -- a flammable.

MS. KINGERY: Incinerator.

MR. KILBREATH: Seasonal cabins, you know, cabin type places. I should be careful. I won't say if you live in Missoula, anywhere Birkenstocks, you might like composting toilets. We have a demo facility in Missoula that's going to try to get a composting toilet and a gray water system. I'm not -- Ever since I listened to the

guy do the presentation on composting toilets, and he talked about fruit flies, I kind of turned off.

MS. WILLIAMS: So we don't really have any better functioning --

MR. KILBREATH: We have some in a recreational setting.

MS. KINGERY: Just if I have to look into my crystal ball, I would see that as more of Montana gets developed, and so here we are stepping into trying to keep our different parts, and gray water comes into -- as a mechanism for helping people pass their nondeg issues, I think composting and incinerating are going to become another tool that they can pull out of their belt to help them with their nondeg issue.

MS. WILLIAMS: I just remember 16 years ago when I was working at the Legislature, that someone came in wanting to put in a composting toilet, and we couldn't find anything that would allow them to do that. So I'm glad --

MR. KILBREATH: We would allow it. And there is a composting manufacturer in Whitefish, and he does systems, and there is trail heads and park areas that have some.

MS. WILLIAMS: It also seems that with

the increasing demand for treated potable water, that it makes sense that we find another way to use fresh water than for waste.

MR. KILBREATH: And the point Barb brings up is when we look at background nondegradation for a lot, if you're between seven and a half milligrams and ten milligrams in your background nitrate, you're in trouble with an onsite system. If you're above ten and below 24, you're in trouble with an onsite system.

Gray water has ten milligrams nitrogen. Gray water with a composting toilet might fill one of those nondeg measures, you know. You've got some places where it might work.

MS. WILLIAMS: Then a last question. The first four months of this year, I was in an interesting environment across the street.

MR. KILBREATH: You had a new learning experience.

MS. WILLIAMS: And I keep hearing this mantra that Montana is not business friendly, that there is excessive red tape, that our environmental regulations are barriers. So I guess my -- and I'm just putting that out there because that's what you hear. And so I guess I'd

like you to comment on whether you think that by adding quite a bit of volume to these regulations, whether you think you're actually making it easier for the regulated community.

MR. KILBREATH: We just clarify what needs to be done to be correct. So my opinion is with clarification it becomes easier. Volume doesn't necessarily mean more difficulty.

MS. WILLIAMS: That's what I would think, but I wanted to hear your perspective.

MS. KINGERY: I think by having a document, a one stop document, rather than like we have over here, where it talks about different vendors always are calling us to be on the list, on a special list. Well, there is no way staffing-wise we could possibly keep a list of vendors. By having a clear document that's all encompassing to see that you meet these criteria, you're welcome to come to Montana.

MR. KILBREATH: So I get a phone call from a poly septic tank manufacturer saying, "I want to sell my tank in Montana. What do I have to do to do that?" I said, "You have to read the septic tank chapter in DEQ4." He said, "I did, and that says it has to have a six foot burial

depth. My tanks aren't rated for six feet." I say, "You can't sell your tank in Montana."

"Is there any mechanisms we can go to get there?" And we said, "Yes, you may apply for a blanket deviation against our design standards, and if that blanket deviation is approved based on your installation instructions, you could then go down that path and market your tank, but you have to market your tank very specifically within your installation requirements."

So those get kind of cumbersome. It would be nice to be able to keep, quote unquote, "the list," but to add to the list and subtract from the list would take people that we don't have.

MS. WILLIAMS: Do you happen to know how this approach or the former approach compares to Wyoming or North Dakota?

MS. KINGERY: Wyoming, it's kind of interesting you mention that, because they are rewriting their onsite standards also, concurrent, at the same time we are, and so we have been communicating back and forth quite a bit with Wyoming. And I don't want to call it a collaborative effort, but we certainly do --

"Okay. There is what we've done. What do you guys think?"

MR. KILBREATH: There would be a lot of similarity in those two documents.

MS. KINGERY: You'll see, once theirs comes out and ours comes out, I think you'll see very similar. I don't know about North Dakota.

MR. KILBREATH: North Dakota has standards for large systems only. I think they probably only have a state engineer that reviews systems when they get to 5,000 gallons or greater. North Dakota is set up in five or seven health districts, and in those health districts, all of the onsite wastewater is regulated by a sanitarian. The last time I talked to Rick Bechtel (phonetic) from North Dakota, there was only three sanitarians in the health districts, and so their individual onsite wastewater stuff in North Dakota is really loose on a good day.

MS. WILLIAMS: Are they seeing problems? Excuse me for bringing up another state, but it's hard to defend what we're doing, which I try and do.

MR. KILBREATH: I listened to Dick talk about onsite septic systems in North Dakota at a

big national conference about four years ago, and he defined a North Dakota definition of advanced treatment as a septic tank to keep your toilet paper out of the road side ditch. So they're kind of like -- their county by county stuff is miles and miles and miles behind where we are.

When you look at us in reference to other states, I think we're pretty forward thinking. We've got a good set of regs. You have states across the United States that the separation of ground water ranges from zero inches to seasonal ground water separation with septic tank to four feet, and we're at four feet.

And we were recently asked by a manufacturer of the septic product if we would consider changing our ground water separation to two feet because you can provide adequate separation, adequate treatment with two feet of soil. I said, "I truly believe that you can do that, but my dead body will be in the way, and you'll step over it before we do a four feet -- (inaudible) -- tank." That's not something we're going to undertake at our level as a proposed change. That should come from some other place.

That experience you have every four

months now, every other year, would be where that would have to start.

MS. WILLIAMS: Well --

MR. KILBREATH: And it might.

MR. HOEHNE: Steve, on Level 2 systems, there is a certain mount of yearly testing that has to be done on it. Is that information required somewhere that says you have to give that to someone?

MR. KILBREATH: That's in the Level 2 rule, and 17.30.718, and the maintenance providers of that data are required to keep that data and present it to us when we request it. And we did a major data request about a year and a half, two years ago, and looked at all that data. Almost all of our Level 2 providers were doing a really good job on the nitrogen.

And the data looks so good that we're contemplating opening those Level 2 rules and changing those monitoring requirements, and decreasing the requirements. If Level 2 is at 60 percent reduction of nitrogen, why don't we just look at nitrogen, and not look at all the other things, because there is about $250 or $300 worth of analytical costs a year to the homeowners. We

could cut that to 40 and get the same result. We're thinking about that.

MS. KINGERY: When we first started down this path, it was kind of interesting to try and, like I said, sort of divvy up what belongs in the DEQ4, what belongs in the rule, and then of course statutes is sort of the umbrella over all of it.

And so there was a lot of things in DEQ4 that was also in the rule, and so we tried to just make this strictly a design document, let the rules take care of the monitoring, and the mixing zones, and all that kind of business, and leave that in the rule, and let this just strictly be "How am I going to design this system?"

MR. KILBREATH: So for instance, that subdivision I passed around that had the 32 lots, and the recirc filter, you take that subdivision file that was submitted to the subdivision program, that had been reviewed under 1736 for the subdivision component, the wastewater system is public. It will be reviewed under 1730(a), and it will be reviewed in Jenny's shop because it has a ground water discharge permit by one of her engineers, and it would be reviewed under 17.30.1000 for ground water discharge permit.

So one file that comes in can have this piece go here, and this piece go here, and you know. So that's why we think this document needs to describe how you do the wastewater treatment system, and it tries to leave those other rules alone, because sometimes those have --

MS. KINGERY: That is where we've got troubles in the old document. It did sort of bring those rules in. And when the rules change, it made it problematic, because the rules changed, but the DEQ4 did not change.

MR. KILBREATH: We live in a world that's got lots of different rules out there, depending on what you're proposing.

So I don't know what your pleasure is, if you guys want to take this home, and read it, and digest it, if you want to say, "Go forth." I don't know what your feel is, because it's a big document, and there is a lot of stuff, you know.

MS. KINGERY: Like I said, we've tried to incorporate many different groups and many different points of view. (Inaudible)

MR. KILBREATH: There's going to be an awful lot of comments yet to come.

MS. KINGERY: I think those are --

MS. WILLIAMS: So your next steps are what?

MR. KILBREATH: The next step is if you give us a blessing to go forward, we'll go to the BER, and they'll set a formal rulemaking process with a public hearing, and we will ask the BER for a longer comment period because it is a lot. We'll activate our blog, and notify people that it's up.

I think we were the first people to use a blog for a rule in the agency, and it worked really well.

MS. KINGERY: It worked great. I think it touches on, like I said, people who are out there. We don't want to travel all -- (inaudible) --

MS. WILLIAMS: So how long of a review period would you request?

MR. KILBREATH: I think we'd probably try to get -- What do they get normally, Jenny? Twenty days?

MS. CHAMBERS: It's normally thirty days.

MR. KILBREATH: So we might go for 60, because it's a lot of comments, a lot of

information.

MS. CHAMBERS: You guys are going to have to watch your six month period from initiation to adoption based upon a longer comment period and how much you're going to get. So you know.

MR. KILBREATH: I think we'll get a pile of comments.

MS. KINGERY: I think we will, too, but like I said, we have tried to, those who have raised their voices already, we've tried to address all of their comments. Some of them we didn't take obviously, and those would be the ones we probably need to address, that we've at least internally gone through those, and made our choices in a way that we think we can defend. It's been very thoughtful process, I guess, is what I want to say.

CHAIRMAN SELCH: What are the thoughts of Council members? Are you guys wanting some more time to review this, and look at this? I personally haven't had a chance to read it, read through it obviously. I glanced at it. From my aspect, I know that we get a lot of requests to review documents for drainfields and stuff like

that. And I'm glad I'll have a document we can review, as opposed to just shrugging our shoulders, and looking at all the numbers, and have something to review first, but --

MS. WILLIAMS: If you need more time, that's understandable. It sounds like we could also participate while they're doing the extended public review; and if they're going to run up against a six month deadline, I would be -- I would suggest that you guys make sure you have enough time to respond as well, which could -- you never know how much time you'll need if you get some significant comments, so --

MR. SALLEY: I feel confident in letting them proceed, and we can use that time ourselves to comment.

CHAIRMAN SELCH: Is there any comments from anyone in the public right now?

MR. WENDLAND: I think obviously from the -- when they have the sanitarians and those kind of people involved in this, there's probably a lot in there that's right; but if we have to make some kind of a comment on it, I'd obviously have to make some time to go through it.

CHAIRMAN SELCH: Well, did we want to

make a motion to let them proceed and make comments during the comment period, or did we -- open to suggestions.

MR. SALLEY: I think that can be a motion, and I'll make it.

CHAIRMAN SELCH: That motion would be to proceed with the changes you made for DEQ4, and take them to the BER.

MR. WENDLAND: I'll second that one.

MS. WILLIAMS: I would encourage the longer comment period, too.

MS. KINGERY: Certainly.

CHAIRMAN SELCH: Okay. I guess we'll do a voice vote on the motion. All in favor.

(Response)

CHAIRMAN SELCH: Opposed.

(No response)

CHAIRMAN SELCH: Motion carries.

MR. BUKANTIS: We've got Dean on the agenda next.

CHAIRMAN SELCH: Thank you very much.

MS. KINGERY: I do encourage you to look through it, and comment on the blog, on the public comment period, all of it.

MR. KILBREATH: If you read our

definition of a bedroom --

CHAIRMAN SELCH: I'm just looking at the schedule here. Is Dean here?

MR. BUKANTIS: He's upstairs.

CHAIRMAN SELCH: Seeing as we are at a little after eleven, maybe we'll see if Dean is available. Does that work? Let's take a short break, and see if Dean is available.

(Recess taken)

CHAIRMAN SELCH: We'll get started again here. If it's okay with everyone, we're going to modify the briefing item agenda. Dean is the action that was supposed to be up next, but we've got Mike Suplee here to talk about nutrient standard, so we'll go ahead with that. Corey, are you still on the phone?

(No response)

CHAIRMAN SELCH: Corey?

(No response)

CHAIRMAN SELCH: We may have lost Corey.

MR. FISHER: I'm here.

CHAIRMAN SELCH: Anyone else on the phone that called in? I didn't hear anyone, but -- okay. So we'll just move on. Mike Suplee is going to talk about nutrient standards.

MR. SUPLEE: I think most of you know me, but I'll just introduce myself anyway. Mike Suplee, I work in the Water Quality Standards Section under Bob, and I've primarily been working on nutrient standards for some years, and we're at a point where I thought it was worthwhile to give you an update on where those water quality standards are, and where they're headed, because there's been some significant changes relative to them in the last six months and then going forward.

So I think in an earlier WPCAC meeting, there was a presentation from John North on the basics of Senate Bill 367; is that true? So I won't spend a lot of time on that, but I will kind of go over it briefly, and if you have any questions on anything as I go on, feel free to ask me.

So Senate Bill 367, which came out of the last Legislature, basically allows the discharger to receive long term, basically up to twenty years, variances from the base numeric nutrient standards. Those are the stringent water quality standards for nutrients that are designed to control nutrification problems in rivers and

streams that we've been working on at a technical level.

Basically there are three categories of discharger that could receive these variances if it's found, or if they determine that they are capable of meeting the standards. One would be for a discharger greater than one million gallons per day, that would be both municipal and private; less than one million gallons per day; and then separate from that all together independent of flow would be lagoon treatment systems. Those would be people that have their own -- (inaudible) -- improvements as their wastewater processing system.

It should be relatively straight forward, in that if the discharger can't meet the base numeric nutrient standards, they can apply for and receive these. They had variances if they can treat to the levels that are specified for each category, and what those are would be greater than one million gallons per day, they would have to treat their effluent; and Type 2, at least one milligram GP per liter; and ten milligrams total nitrogen per liter.

If they are in the less than one MGD

category, it's two for total phosphorus, two milligrams per liter, and 15 milligrams TN per liter. And if they're in the lagoon treatment system category, they're essentially in a hold the line status. They need to maintain current performance.

So for many of them, that would at least mean monitoring which perhaps is pretty common, and they may not have monitoring data for nutrients at this point in time. So that's something that they have to add to receive this variance.

So the idea is it's going to allow time for the discharger to comply with the standards, and over this 20 year time period. The ultimate goal is to meet the base standards at the end of the variance period, but this can occur conforming with cost and technology changes which can be anticipated for years.

There is also a caveat or an element of the law that basically we the Department, in conjunction with the nutrient work group that our advisory council need to revisit the discharge concentrations I just mentioned to you for each category at three year intervals starting in 2016

to update them, make them more stringent as costs and technology increase.

So one way or the other they'll be moving in steps towards the standards over the time period that we laid out.

So that's the basics of the Senate Bill 367. There's some other stuff in there, but I think that's probably all we need to talk about right now, unless you have any specific questions on that.

EPA is largely comfortable with this statute and this law. We worked closely with them, we have worked closely with the elements of the Clean Water Act to make sure that from our perspective and our legal staff's perspective, everything we've done is legal, and falls within the framework of the Clean Water Act, although some of the elements are, I'd say, novel or unusual, or haven't been seen by EPA before, and so they're still mulling over aspects of it.

What I heard most recently is they're largely comfortable with the entire approach, with the caveat and sticking points that they're kind of working through, kind of like that. How that will ultimately get resolved, we don't know for

sure, but it looks promising, that they will accept this.

Of course, as you know, all water quality standards changes that we make or put this process in place, EPA has to sign off on it in order to approve permit for this process. (Inaudible) So we don't want that to happen.

So that's sort of policy. And so moving along in several directions there. At the technical level, I'll give you a status update on the base numeric nutrient standards themselves.

For large rivers, we are now completing, and should have out for public review -- which can include this group if they wanted to -- in just a few weeks our first numeric nutrient standard derived from a water quality model for a large river. We've been working on this since 2007. It's a large undertaking, and it's been precedent setting in a number of different ways. It's not been done before, but we're very, very happy with the result.

It was a model that we built for the lower Yellowstone River essentially from Forsyth to the state border, and we have developed two different criteria for the lower river from this

model. And it's already gone through internal peer review and it's going to go to external peer review and general review here shortly. So if any of you are interested in seeing that document, just let Bob know, and we'll make sure a copy gets to you, or we'll point you to where it's held.

Our plans are -- Well, also concurrently, we are working on a similar approach for the Upper Missouri, and this would be for Canyon Ferry upstream to the Three Forks, using a water quality model. We've been collecting data to build that model over last summer and this summer, and that's should be sufficient for us to build that model going forward. We anticipate we'll have that model built much more quickly than the Yellowstone model because we already went through the learning curve, so maybe a year or two out there.

We have planned for next summer the rest of the main reach of the Yellowstone River, so that would essentially be from Forsyth all the way up to the Park, with emphasis being placed more on the industrial zone between Livingston and Billings. There will be a lot of data collection through there.

We were going to do it this summer. We cancelled that even before the oil spill simply because the flows were so high, and we try to collect data in these models ideally close to a low flow situation, which is what generally permits write to, and what the model design and simulate. And we collected our data in 2007. It was a very low flow year, and that was excellent, we got really good data, and we were able to set that model nicely.

We're hoping next year will be more of a normal flow year, because this year is obviously very much an anomaly, and we would have probably cancelled anyway because we couldn't -- because of spill.

So we're on target for next summer to do the remainder of the Yellowstone, the Missouri; and from there forward, we have other elements, other reaches of the Missouri, and other rivers that we will target over the years to build these case-by-case models to derive the standards.

For wadeable streams, I put out a report in 2008 through discussions with the nutrient work group and subsequent review of our approach. I'm tweaking some of the approaches that I used to

develop those criteria, and I'm going through that process right now as we -- deriving the standards that we will recommend for wadeable streams for the various ecoregions of the state that should probably be out this fall.

So the numbers are going to change a little bit, and for some region, they're going come up substantially. It just depends. There is going to be more site specific zones that will have criteria.

For lakes, data collection for lakes occurred between 2003 and 2008. We've done some initial analysis, but that has not been our primary focus. Our focus is on flowing waters where most of the discharging states occur, and so we'll be moving forward on lakes in the near future.

Also we completed an analysis on the Clark Fork River, for which standards were adopted in 2002, and of course those standards were actually passed before this group in 2001 or 2002. And now that there is over 12 to 13 years worth of monitoring data along that river, and many nutrient reduction efforts have gone into place, we've been able to actually see significant

improvements along the river, especially below Missoula.

And one of the recommendations we'll probably make along with this package is that one of the standards on that river, which is currently 39 migrograms TP per liter, we'll probably recommend that it go to 20. That would be in the river from the Blackfoot downstream. The river is already meeting that standard every summer already for the last two years, largely because of existing efforts, and the water quality is better than that already. And it seems like it needed to be that low in order to see and achieve the results that we wanted.

So the algae levels have dropped, but it seems like it's doing best when the criteria is lower than what was originally set, 39 micrograms. That's another recommendation we made.

Relative to duration and frequency, the other two elements of the water quality standard, independent and nondeg, we'll be looking at a seasonal 14Q10, so that would be basically a two week period of low flow that occurs once every ten years, that would be the flow and duration that permitting, for example, we use when they derive

the water levels, etc., that they would try to permit to.

And that's based on the time it takes for algae growth, once we transfer exceeded or go too high, basically reach a nuisance level where they begin to -- (inaudible) -- it takes a little while. So about 14 to 20 days, so this is set up to restrain that period.

Nondeg. Currently nondeg -- nutrients are lumped with toxics in our nondeg report, and there might be -- we're kind of internally discussing how we ought to flesh this out.

At a minimum, the base numeric nutrient standard for total nitrogen and total phosphorus will be separated out from toxics, and will go nondeg regulation specific to that -- that's our intent -- because they're really not -- at least the concentrations and the nutrient species we're talking about are not a toxic, like ammonia and etc., so they need to have nondeg, both are written for that, so we're working on that as well.

So that's kind of the basics of what's moving forward. So we have the Senate Bill in one place that has basically cleared the path in many

ways to make at least implementing nutrient standards and how stringent they are a possibility. We're in discussion with EPA on fine points of that legislation, and the part that they're not real comfortable with, moving forward on the technical elements.

And so the idea is all that this stuff will converge here in the fall, and will become a rule package -- (inaudible) -- So this is our roughed out timeline, and these timelines have slipped before, but I will give you what our timeline is.

September 1st, which is actually right around the corner here, this is a hard number. The nutrient work group has a subcommittee that is going to meet to discuss and hopefully iron out some policy issues pertaining to Senate Bill 367 from the stakeholders perspective. EPA will probably also participate in that.

I have the agenda on that if anybody is interested, and any of you are also welcome to comment. It's a public meeting. It will be in this room. This room, September 1st, 10:00 to 4:00 p.m.

And again, that will be to discuss the

details of policy issues pertaining to Senate Bill 367. I have the agenda. The agenda is also out on the nutrient work group website, which is right next to your guys' out there on the website with -- (inaudible) --

Then fall and early winter, our goal is to complete the numeric nutrient criteria recommendations, and that would include the Yellowstone, the lower Yellowstone River, the wadeable streams, the updates to the Clark Fork; and we have also been talking about including the water quality criteria for Flathead Lake that was derived for the TMDL, and also which Jack Stanford and the bio station have been working to characterize that lake for so long, and carry that forward for the water quality standards as well.

That would not be work that we would do. There is really no value added. They've studied that place a long time. So basically take their work and just throw it into the rule.

We're still going to work on the nondeg language this fall. We've got a meeting in front of you, like I said. And then any rule-based elements pertaining to Senate Bill 367 interpretation that may need to occur again, so

that might be at the September 1st meeting.

And then we'll present that rule package -- so criteria, implementation, language as needed, etc. -- to the nutrient work group, where they will have their chance to mull over it, and then the next step is that we come to you. Probably --

Our goal, we hope, is to go to the February 2012, if there is one -- they haven't scheduled it, but we think that's when they're going to do their thing -- Board of Environmental Review meeting for consideration and adoption of the standards and the package. So that means that we would come to you, WPCAC, sometime in late winter. I'm not sure what the schedule will be, but that's what we would approach you with that, that whole package.

So I wanted to kind of give you a heads up on where we've been, and where we look like we're headed. So far we look like we're on schedule. I don't see anything so far that looks like it's a show stopper, but that could change. If it doesn't, then you would likely see a rule package pertaining to nutrient standards and implementation thereof late this winter, late this

year.

So that's basically my update. I would be happy to answer any specific questions you have on any of the stuff that I talked about or other stuff.

MS. BUCKLIN-SANCHEZ: I have a couple questions. The first question I have is that you talked about the EPA had some comment on Senate Bill 367. Can you provide some detail on that.

MR. SUPLEE: The concentrations that I -- There's a couple things. First of all, part of the rationale for not being able to meet the base numeric nutrient standards today is that it would be very expensive. I think that that's pretty clear. But EPA wanted to see a demonstration of that.

And there is actually economic methodologies for carrying out that evaluation. We're right in the middle of basically preparing that for them. We don't think that's going to be a problem. There is a couple little minor sticking points on that, but I think that one will probably be okay, based on the amount of work we've done so far. We've been able to show that, yes, we do want people to meet those standards,

but meeting them today right now for everybody would be -- (inaudible) -- So that's going very well.

I think the larger sticking point at this point is the concentrations I mentioned to you earlier, the one and the ten, and the two and the fifteen, and the hold the line. Essentially we arrived at those through discussions, through debate, through negotiation with our stakeholders And the senatorial adoption process, all that -- (inaudible) -- legislation.

They have never quite seen it done this way before, and they're not totally sure how they feel about it. That's the one they're mulling over.

MS. BUCKLIN-SANCHEZ: I have a -- excuse me. So what they're saying is, "We've not really seen derivation of limit based on negotiation"?

MR. SUPLEE: Yes. Essentially. Now, they're very, very comfortable with the way we've derived based on our nutrient standards. They're very comfortable with that. The science behind that is solid. But this kind of "how to get there" process is new. They're not real -- and I think they're actually very comfortable with some

dischargers, and those numbers of some dischargers. They're much less comfortable with certain dischargers that they think need to be tested. That's where they've got their hang-up, and that's where we're trying to feel our way through this.

George Matthius is very involved in the discussions. This has gone up to Region 8, all the way to the top of Region 8, and out to headquarters, so it's being discussed in Washington.

MS. BUCKLIN-SANCHEZ: The second question I had was: You alluded to increased quality in the Clark Fork by saying that that limit maybe would go from 39 to 20 total phosphorus.

MR. SUPLEE: Yes.

MS. BUCKLIN-SANCHEZ: So I'm curious what's has caused the change. Has it been source water protection actions or -- yeah.

MR. SUPLEE: Yes, there have been a series of actions. There have been -- You know, even before that law was adopted, DNRC's monitoring and nutrient reduction program went into place in the late 1990s. Ten years before

that, there was a phosphorus ban in the whole watershed that was voluntarily implemented by many cities, so that brought phosphorus down a lot already.

Missoula went through a major wastewater treatment upgrade in around 2004, and it was on line by 2005, and you can clearly see it in the data set. If you look at the site that is downstream to Missoula, and all the TP and TN numbers dropped substantially. So that's been a big piece of the puzzle.

So there's been basically efforts and work to reduce nutrients over the years, and they're starting to show up and take effect in some parts of the rivers. Other parts of it still have issues, primarily in upstream.

MS. BUCKLIN-SANCHEZ: Did the phosphorus, the voluntary phosphorus ban, or voluntary phosphorus -- I don't know how to say it right -- but did that occur concurrently with upgrades to the treatment plan?

MR. SUPLEE: No. It occurred many, many years before. That actually went in place in 1989, so that went in place almost ten years before the voluntary nutrient reduction agreement

that was signed in 1998. And then they got their plant on line with this new, nicer DNR plan, biological nutrient reduction plan in 2004. It's been kind of happening over time.

But the data set that we used to assess this spans from -- well, extending -- really, really solid data set from 1980 to -- (inaudible) --

MR. HOEHNE: Mike, during the Legislature when these numbers were set for the bigger sized systems, obviously those numbers weren't picked out of the air. There were engineers that come up with these systems can do this and -- (inaudible) --

MR. SUPLEE: Yes, they were set, I would say, at levels where -- For example, let's just talk about one category, where the limit should be. They are very realistically achievable for people in that category today, in most cases.

Now, maybe EPA or even that proposed numbers that were substantially tighter than that initially, and that would have been a much tougher thing to achieve today cost-wise, etc. So you might view them as a really good starting point. They're going to definitely require some upgrades

in quite a few facilities already just to achieve the variance numbers, but they are beyond reason -- (inaudible) -- at this point in time.

MR. HOEHNE: So the argument it was on our part is a big factor, and EPA -- (inaudible) --

MR. SUPLEE: Primarily with -- The categories, of course. Again, it's a thing where they like to split hairs, and say, "Well, when the WQB covers a lot of people from this little town, Deer Lodge, up to Billings -- Billings maybe or Missoula, or whatever you want to name offhand --" that's kind of been their take. And let's see how this plays out.

They actually did at one point during the legislation have another category, but the legislation was fast and dirty, and a lot of stuff was all happening at once, and at some point along that process, that one went away, and came back with these three. So that's all I can say about that. And that's a pretty crazy process -- (inaudible) --

MS. WILLIAMS: Question. So will the results of that legislation be that -- I think this is what maybe EPA is saying -- is that

entities that possibly could have done more will fall back to meeting the variance level, right? Is there any incentive for anyone to do more than the variance, I guess?

MR. SUPLEE: I don't know if there is an incentive per se. There could be. I'm going to approach this a couple ways. They're putting in a trading policy, so a person who could do better -- although I don't think you can actually trade to the -- can't trade to the variance. That actually doesn't apply.

I think the only incentive per se really is the hammer at the end of the day, the 20 years. Now, there are people that are already doing better than that now, and I'll kind of go to Jenny to explain what her view might be on that. If they're doing better than that now, and the standards get adopted, for example, they know those are out there, they'll say they're treating to 5 TN and .5 TP, they're not going to back slide, right, in most cases?

MS. CHAMBERS: That's the tricky part, because you could say that's what you're performing at now, is the 5.05. The standard, as far as water quality standards, we're looking at

one of the requirements for the water quality standard is the low, low numbers. The option they have is to apply for variance. The general variance would be the ten and one, so I would probably deny the ten and one because they're already doing that, so they might have to go to option No. 2, which is the site specific variance for that municipality or that treatment process, and we'd probably then hold the line at the five and .1, but it would be under a more specific variance for that facility, not a general variance.

Otherwise they would have to apply the standard, Mike, they'd have to go all the way down the standard and say, "That's your final limits," and maybe we would work with that system, and maybe they're supposed to meet that final standard with dilution and mixing zone, and they just need ten years or five years to get that. Well, maybe that could develop that permit condition as a compliance condition in the permit to give them that time to meet that standard, and hold the line where the current performance in order to get that, and then they wouldn't need any variance, and they would just be on track to meet that

actual water quality standard.

So it's really going to be a case-by-case look, based upon where folks are at in the permitting process and the renewal process on what you look at based on their discharges.

MS. WILLIAMS: Then will you be using judgment on whether you grant them 20 years from the outset, or whether you grant them five years and revisit, or how does that 20 years time frame figure?

MR. SUPLEE: The statute is pretty clear that the person applies for a variance can be for up to twenty years.

MS. WILLIAMS: So it's what they apply for.

MR. SUPLEE: Right. Once they initially apply for it and get it, they've got a 20 year window. But at the same time, the numbers that they are operating under, the one and the ten, for example, those could change during that 20 years period, so we're going to be revisiting that in another three years; and if they were to change, then the basis for their old one and ten number has sunsetted, so they've got to meet the new criteria, intermediate numbers, whatever it may

be, and by that time they're already moving to the standards.

So it's a big time window, but it's not like it's just going to be static and the variance values will change -- (inaudible) --

CHAIRMAN SELCH: Mike, the thirteen to 20 on the Clark Fork, did you say Deer Lodge would be the end of one million --

MR. SUPLEE: I believe -- I don't know. I don't remember what -- I think they just meet -- (inaudible) -- do you know, Jenny, where they are?

MS. CHAMBERS: It is a design condition, so they're probably discharging below one. I don't know what their design is off the top of my head.

CHAIRMAN SELCH: Deer Lodge would be the size that would be right there -- (inaudible) --

MR. SUPLEE: Incidentally, the standards for where Deer Lodge is are already 20 by -- (inaudible) -- they're upstream of the Blackfoot. Where we want to change them is below the Blackfoot down to the confluence with the Flathead because it's working, and it needs to be that low to work, and they're already there or lower, so that whole lower stretch of river is consistently

during the summer below 20. Others around 19 -- (inaudible) --

And like I say, a large part of that, the Blackfoot provides a lot of dilution, which really helps a lot; and then Missoula's upgrade was a significant step forward for the lower river.

MS. CHAMBERS: And Deer Lodge, where they discharge, based on what the nutrient criteria would go into effect, they have a zero waste -- (inaudible) -- so they technically shouldn't discharge any amount of wastewater to the Clark Fork during the summer season, so they're working on plant upgrades to work on treatment process changes for the winter months, and then land application and storage for the summer months. So that's going to help in the future with nutrient -- (inaudible) --

MS. WILLIAMS: I have a follow up question to that. Many communities are going on discharge systems. Would that affect the local flow in the river, in rivers?

MR. SUPLEE: It could, I suppose. It depends how effluent dominant they are. A number of the smaller communities that we've had

discussions with, I also sit down with the engineers when a facility is looking at upgrade, and kind of give them the crystal ball view of what's coming down the road with nutrient standards, and maybe they ought to plan for this now, and quite a number of years.

A lot of the smaller communities that are a few hundred people, they're basically thinking about planned -- (inaudible) --

MS. BUCKLIN-SANCHEZ: Deer Lodge could be significant in the summer if it's not discharging.

MR. SUPLEE: I think that there was a period of time when they didn't discharge during the summer because they were able to send their effluent to -- (inaudible) -- ranch, which apparently that fell apart for some reason. I don't know. But in terms of flow in the Clark Fork, they're not. If they're in a little -- (inaudible) -- the stream, that might be a different story.

CHAIRMAN SELCH: Any other questions for Mike?

MR. SALLEY: You want us to review this rule package sometime in the winter. Will we be

able to get that before a meeting so we can be aware of --

MR. SUPLEE: Absolutely. Depending on how guys would like to do it. It's kind of a strange situation, in that we have another vet, we have vetted nutrient work group for you, so we've got another hoop to jump through. So I would be comfortable, after the nutrient work group is largely happy with it, even if your meetings aren't going to be for some weeks in advance. After that, I don't know a -- (inaudible) -- provide it to you, so you can get like advanced ability to mull over it, because it will be a fairly good sized package, I would imagine.

We're going to create a new circular for these standards that will be -- (inaudible) -- DEQ12, because unlike DEQ7, which apply at all streams, and they apply all year around, and these are zoned, and they're very different, so we're going to split them out as their own circular. So yes, we can get that to you well in advance of any type of action.

MS. WILLIAMS: Are there other states -- this will probably be a theme with me -- but are other states that are approaching this with EPA in

the same way?

MR. SUPLEE: Not quite the same way. The two other states that I know that are most active are Florida and Wisconsin. Florida, what happened was they had been working on nutrient standards from a technical basis for a very long time. They also were coming up with numbers finally concerning a different climate -- You think Florida is to Montana -- but many criteria to -- (inaudible) -- seems to be the control nutrification numbers as well.

EPA got sued, I believe because they were not moving quick enough, so they ended up promulgating standards for Florida, even though Florida had been moving on them. At that point, there was a whole series of lawsuits going, and counter lawsuits, and the last I heard was that the State of Florida is now proposing criteria and an implementation process that they think will kind of please all parties.

In and amongst that, in the -- (inaudible) -- criteria, which of course are low and difficult to meet, they have a pretty large piece -- they want to use variances, although I haven't seen their new variance package. Their

old one that I saw some months ago wasn't very detailed like ours. Their new one might be better. I don't know.

The other approach, what they kind of hang their hat on, is site specific alternative criteria, the idea being that if you develop a TMDL, and the TMDL says this is what the concentrations need to be, effective use, and then they use that, instead of these criteria that they developed by standards for.

The reason I don't think that's going to work very well is because if TMDL guys do a good job, and develop a new criterion, it's going to look very much the same as the standards, so I don't think that's going to solve the issue. I think phasing them in over time will work better.

So Florida, supposedly the state has got a process that I think will please all parties, EPA, industry folks, environmental groups, etc.

In Wisconsin, they've already adopted phosphorus criteria. Again, they look about like ours. And they have some implementation. It falls more in the hands of permitting. They basically are getting three or four permit cycles to phase them in. So maybe they're going to be

looking at ten to fifteen years, and they're not calling them variances, they're calling them compliance schedules. I believe they have a point -- (inaudible) -- so that's similar to ours, got that idea from them.

And they put in a pretty big nonpoint source requirement. That was a big step forward for that state, which was that people that are nonpoint source contributors to nutrient problems in water bodies need to put in place at least best management practices that achieve this sort of reductions, etc. So that's something we have not attempted to do, but they did in Wisconsin.

So those were the two places where I've seen the most action in this area.

MS. WILLIAMS: Then the other states are just adopting real low standards?

MR. SUPLEE: No, they're dragging their feet. They're waiting for EPA to push them harder, they're developing them, and they're kind of waiting and seeing. A lot of them are kind of focusing on lakes where you're not going to get so much dischargers, so there is not much going on there.

One exception -- the two exceptions

regionally, Colorado and Utah have both -- Utah is working on standards, but they haven't attempted anything in terms of this policy yet.

Colorado did something kind of odd. They basically said that -- I believe it was the standards -- they have some numbers developed for rivers and streams, but they can't be adopted anywhere below a wastewater facility. So that was kind of a --

EPA didn't like that one at all, and that -- they are -- EPA has a lot of problems with a lot of their approaches, which I tend to agree with. I think they pretty much did this Clean Water Act -- (inaudible) --

So actually there is probably maybe there is two states. There are other states including ones in our region that are working on that as well.

MS. WILLIAMS: Then last. The reason we're not putting standards really is to nonpoint sources, we're relying on the TMDL process to deal with that?

MR. SUPLEE: We are. Then there is the whole issue of -- and then it goes to the Legislature. Basically Richard has said in

meetings that he wasn't willing to do it last session. But that's the willingness at that level that we do kind of something like that in an agricultural state like Montana.

MS. WILLIAMS: Sure.

MS. CHAMBERS: It is more stringent than the Clean Water Act as far as the regulatory and the point versus nonpoint sources -- (inaudible) -- so if the Water Quality Act statute could have something in there that would have more stringent, but it's not really in the purview of the Department.

MS. WILLIAMS: Yes. Thanks.

MR. SUPLEE: So I think what we're seeing nationally is standards are coming on line quite a bit. Different states are trying different tactics. I think what will happen is one of the states that's got an approach that will work relatively well, will probably spread more quickly once that gets figured out, but it's almost experimental at this stage. This is how they're doing it in Florida, this is how we're doing it, it's different in Colorado, and it's different in Wisconsin, and none of them are really exactly all identical.

They've even attempted to adopt nitrogen standards in Wisconsin, although if you work in this arena, you do need to control the nitrogen if you're going to control the nutrification problem. That's very clear. So they're not going to solve it alone by this process. They weren't willing to go that on nitrogen at that point. They have some big time nitrogen issues through the corn belt, in the central United States, very, very high levels of nitrates all working their way down to the Gulf.

MS. WILLIAMS: It seems like the overall process you've used has been sensitive to the issues that municipalities and others are having, and has been open, and collaborative. So it's nice to see that Montana may be sort of leading the way.

MR. SUPLEE: So hopefully if EPA likes this approach, and we'll be in good shape. I think we'll be in a position where we can, you know, work our way towards these standards over time, and hopefully we'll be able to get there at the end of this fairly long time -- (inaudible) --

CHAIRMAN SELCH: I think I looked at the schedule, and I think we have a meeting November

4th, and another one in December, so I don't know if you can get it through the work group before that. That would be a good one to maybe brief on, and maybe have action in December.

MR. SUPLEE: We've got a nutrient work group in late September, and late October, so I think by late October, we might be starting to talk about a package, so I think that late November or December meeting is when you guys might be able to see the package.

MR. BUKANTIS: Just for clarification, the last scheduled meeting is the November meeting.

CHAIRMAN SELCH: We don't have one in December.

MR. BUKANTIS: No. The Board's last scheduled meeting is December 2nd. So probably typically what we would do is set that November meeting, one of the agenda items, we'll schedule for the first meeting for next year. And then we'll have the Board's schedule by then, and set our schedule for the next year. So I'm thinking Mike's package, the probably earliest it could come to the Council as an action item would be in November, but more than likely January.

CHAIRMAN SELCH: And you want to move that on to the BER by February?

MR. SUPLEE: That's our target. If they have scheduled the meeting. They haven't scheduled their 2012 schedule yet, but we assume that they'll have one in February.

CHAIRMAN SELCH: Any other questions?

Hearing none, it looks like we're moving on to lunch. Thanks, Mike. Good update. Okay. See, we're at twelve, a little after twelve. We'll take a 30, 40 minute lunch here, and we'll come back with Dean's TMDL update right after lunch. Maybe plan for 12:45.

(Lunch recess taken)

CHAIRMAN SELCH: We'll probably get started here. I don't know if Corey is back on the phone, but he'll probably be calling back in. So we'll start with Dean Yashan and his TMDL update. I see we've all got a colored map.

MR. YASHAN: I see some of you have a pamphlet. I just want to start off by saying I'm going to read over a lot of the basics of what a TMDL is. I think maybe a lot of you have been through that, or maybe before, but I did want to make you aware of this pamphlet, and there is a

website where you can get a simulation of the equipment. And just have a basic -- (inaudible) --

Certainly for this group, I'd come back and present -- (inaudible) -- water quality. For today, I'm just going to give a little bit of a status update, but I am going to also talk about some general things about just generally how we manage the program, and TMDL status. There is a handout, so I don't have a presentation, so you might want to go to the page on the hand out. I don't know. Is there a separate hand out?

Most of the TMDL development, as I have identified here, falls under main pollutant groups, either sediments, nutrients, metals, temperature, pathogen, and salinity, and probably the big four are sediments, metals, and temperature -- (inaudible) -- so pretty much all working on tend to follow those groups.

A few basics about TMDL development. One water body segment can have multiple pollutant impairment, so therefore can require multiple TMDL's. So one water body might have a sediment TMDL, a nitrate TMDL, and a copper TMDL, and so you can have the whole -- (inaudible) -- pollutant

groups applied to a water body segment.

A TMDL project. We have project areas represented by this map. They tend to overlap exactly what we call TMDL planning areas. More than any project associated with TMDL document could include anywhere from one to more than 100 TMDL's. We have examples of those out there. Lake Helena's TMDL had more than 100 TMDL's included within it, where's like -- (inaudible) -- creek watershed document had one TMDL within it.

So we have a habit of calling these documents just a TMDL, which is poor terminology because they are documents with multiple TMDL's in it. So we fall into poor terminology in our program. Myself, too.

The reason I bring up those TMDL pollutant groups is because TMDL development is very unique with each of those pollutant groups. The way we do a temperature TMDL is very, very different than how we do a sediment TMDL, the type of data collected, the type of field work that we go out in the field, all across the board.

The standards that are applicable. You had Mike Suplee talking about the nutrient standards, very important aspect of nutrient TMDL

development, doesn't relate at all to temperature TMDL development.

And of course, one of our major program deficiencies, we try to do all the TMDL's at once in a watershed, try to start them at least all at once.

Often what happens, though, is what's really efficient is to make sure that we at least have projects where if we have sediment TMDL's, we try to do all the sediment TMDL's in that watershed no matter what the date of the listing was. If we have ten tributaries in sediment impairment, we try to do all ten at once, and some are in 96, and some -- (inaudible) -- the major efficiency is to do them all at once within that TMDL development. Kind of what we call the listing control concept.

What will happen sometimes, though, is like maybe we have some large rivers, or we have trouble with data gathering, data collection, so sometimes the metals TMDL work will get out better than like say the sediment TMDL work, and so instead of sitting on that information, we'll go ahead and produce a document with just all the metal TMDL's in them, and follow up a later date

with the sediment TMDL's in that document.

And so you'll see in some watersheds, we have multiple documents. The Blackfoot headwaters is an example of that. The first document had metals TMDL's contained within, and the second -- (inaudible) --

So there is a lot of difference between pollutant groups, and specifically mostly like nutrients and sediment also. To get to a certain size river, the TMDL development starts becoming quite different in that sense. I know Mike talked about that with the nutrient standard development, but the large river work for, say, the Yellowstone River TMDL development is quite different than the -- (inaudible) -- and then you place in the different for sediment.

Not so much for metals. And temperature gets more complex, but conceptually it's not that. Trying to kind of give you an idea as how we -- (inaudible) -- for project management. We have six TMDL development staff within my group of the -- (inaudible) -- production. Myself, you know who I am. I'm the Section Manager of the Watershed Section DEQ, and I have six staff who are writing TMDL's. There's also two staff at EPA

that are writing TMDL's also.

So if we tend to have them, of the major pollutant groups, we tend to focus on two or three, each individual staff person. So we assign them pollutant groups within a project area, and every project area tends to have at least two people, two project managers. One person may be doing sediment and temperature, and the other may be doing nutrients and metals TMDL's.

Again, the goal is to complete all at once in one document, but sometimes it's in stages. So they have multiple project managers.

Also sometimes we have personnel within my staff, Christina Staten, who gets assigned like a coordinator role, where you have a lot of stakeholder outreach, multiple TMDL project managers. It's very helpful to have a coordinator help with things like stakeholder outreach, final document completion, landowner assets, and things like that. But also many watersheds, we also have conservation district or watersheds groups -- (inaudible) -- coordination assistance.

I guess some of our TMDL projects right now are in combination DEQ/EPA efforts, a lot of that because people that EPA has over there

working on TMDL documents worked for me previously, and so when you work for EPA, you just take your workload with you, and it's more efficient that way. The goal was that person would continue working on TMDL's, so we just kept the continuity in the operation.

But there's a lot of linkage in some cases. Some of our modelers may be consultants supporting the work, they're talking about administrative support for document production and things like that. So we really do have joint efforts. There's a few areas where it's pretty much solely EPA doing the work with consultants, just a few of those. There's a lot of areas where it's just me doing the work, and very little EPA across the board.

We refer back and forth to the map here. I'll look at the map more often. A color version there. But just to give you an idea of kind of the status of TMDL documents that we've completed in the past year, going back to August of 2010, July. We've got documents for the west slope of the Gallatin. We addressed sediment, nutrients, and pathogens in that document. There are eight total TMDL's.

We completed a document for the Lower Clark Fork tributary with five sediment TMDL's. For the Red Water, we completed a document with nutrient salinity TMDL's for a total of 20 TMDL's. For Missouri/Cascade/Belt -- oh, boy. Sorry about that. I should have caught that. This says nutrient salinity TMDL. It should say metals salinity TMDL's. It was mainly a metals TMDL document. That's where we combined a couple of things for spatial reasons.

So that's an idea where we have a project area that really overlaps to what we call referred to -- (inaudible) --

Some of the TMDL documents that are nearing completion, the Bitterroot for sediment and temperature TMDL's is due for EPA approval any day now. The Tobacco is out for public comment, closing Monday, for some sediment TMDL's; and the Landusky TMDL document with about six metals TMDL's should be out for public comment a couple days ago.

MR. WENDLAND: So how come you have so many on that? Are you just doing a short section for each one of those for 61 TMDL's?

MR. YASHAN: Partly. That was metals a

lot of times, because with the mining, you have copper, you have arsenic, you have lead, zinc.

MR. WENDLAND: So it has more to do with each individual metal than it is the piece of -- the stretch of the stream or river?

MR. YASHAN: What happens is you maybe have like six or eight stretches of river, and they each have maybe two to five TMDL's for each reach, so multiplying that out. But a couple of those streams up there, some of them have like seven to eight metal impairments, just a big mix of metals contamination in that area, quite heavily contaminated. It's a small area if you look at the map, you know, the short segments coming from there, but a lot of metals contamination issues there.

MR. WENDLAND: (Inaudible)

MR. YASHAN: In fact, actually what we're seeing is -- you have some improvements in water quality in that area with all the cleanup going on in there, but there is still a lot of issues.

Other areas in the near term, where you'll see documents come out. The Little Blackfoot, where we had seven nutrient and metals

TMDL's. We have a large number there, partly because of the metals, and same point. Sediment, metals TMDL's. It's an example of one where we split the nutrient TMDL work from the sediment, metals, and nutrient TMDL's, and will be coming out. Then just like this, all project area.

If you look at the map here, I kind of break things out. We have areas with TMDL documents, watershed plans in green. You'll note that because we pushed some of the work back in time, that that represents the -- we took all of the green areas, it's about 75 or 80 percent of all of the TMDL in those areas are completed. So some of the areas have 100 percent of the ones we know of today that have been addressed, and some where we still have work that has to go back and be accomplished. In fact, some that we're currently working on -- they have a cross hatch in there.

The blue is where we have TMDL development, what I call TMDL development underway. Notice there is a focus on western Montana at this point in time. There is work going on in the east. And I did make a mistake. That Fort Peck area trips should also be colored

blue because of the work we have going on in there. The reality is that Fort Peck area trips involve one water body, and color in the rest of it.

It used to be that when we'd pick up a TMDL document, TMDL program would have a big need for a lot of data gathering, a lot of sampling, especially things like metals and nutrients, to just get a good understanding of what the impairment problem.

The way things have really shifted here lately is monitoring assessment group -- (inaudible) -- is out ahead of us collecting a lot of data, and so when it comes to us, we have a lot more information on what the status is of the impairment for that water body. And actually EPA also hired some consultants to supplement a lot of the information, a lot of eastern Montana areas there.

So we have that kind of orange color that shows where there has been a lot of monitoring going on, different aspects of monitoring some of the water bodies, so it was really something in the future we pick those areas up, those are the areas that need a lot more

information in there.

My last page there, Page 3, just kind of gives you an idea where we're at and where we've been. As of today, we have 780 EPA approved TMDL's going all the way back to -- and heard someone mention the Clark Fork TMDL, the TMDL's associated with that, going way back to 1996.

Kind of give you a run down on the different type of TMDL in a grid. A lot of metal, a lot of sediments TMDL's. It's going to be probably switching to a lot more nutrient TMDL's relative to the overall percentage in the future.

We've also addressed greater than 250 nonpollutant impairments in the TMDL documents. Most of our habitat alteration impairments, that are all -- (inaudible) -- sediment TMDL, a lot of the same type of problems, a lot of the same solutions associated with these kind of alterations. In some cases, kind of a redundant listing in my mind.

And also we ultimately addressed some -- discussed some -- (inaudible) -- alteration impediments in TMDL documents, and at times temperature TMDL's.

Looking forward. For the 2010 list, if

we subtract out the recently approved one, that still leaves 1,597 TMDL's that are part of our workload. Of all those, we have 664 scheduled for completion between now and 2014. That's pretty much what you're seeing in this map. The areas that are blue, a lot of the green areas are going back in, and there may be a hand pulled TMDL's that didn't get written in the past that we're going to kind of finish those up, specifically the west slope area.

Of those 664, just to give you an idea of the ever changing aspect of them doing TMDL's, about -- I'm estimating, based on the last year and a half, that about 10 percent of those will be removed, and we won't do a TMDL because we've concluded that it's not impaired. But at the same time, we'll probably find 20 to 30 percent increase in new impairments identified.

We've seen a lot of metals. We'll do a suite of sampling, and maybe we identify two or three metals -- (inaudible) -- new metals for that water body. But we also see it for nutrients sometimes, too. We've been looking at total phosphorus. When we get the extra data, we also include -- Total nitrogen is also an impairment,

so we do a TMDL for both.

I think it's important to point out that there is a lot of stuff going on that's really helping provide a foundation for future TMDL development. You heard Mike Suplee up here talking earlier. That's been huge assistance for the nutrient TMDL development work. It's a lot easier working off the numeric than a standard in TMDL development.

I mentioned about the large river work in Yellowstone from numeric nutrient standard development. There's a lot of projects going on for that, focusing on the Yellowstone and Missouri; a lot of work going on in the Tongue/Powder area, the salinity, EC/SAR standards, some modeling work, some model refining that is going on, a lot of sampling, some of the sampling I talked about that's been going on there for years.

We also have our assessment method updates out there that's helping refine probably the -- (inaudible) -- water quality standards for temperature, metals, nutrients, and sediment.

I mentioned about the EPA has associated impairment updates. That was one of the areas I

talked about there. Currently the areas that are blue, and wrapping back around, really filling in a lot of data, really going into, instead of having maybe one or two data points to work with to understand the problem. In many cases we're having five to fifteen -- (inaudible) -- water quality, and sources, too.

So questions? Any questions?

MR. WENDLAND: I know originally they were going to have all the TMDL's done in the state by such and such a date. Obviously that's not doing to happen, because we were going to get them all done, and then started revisiting in five years so -- (inaudible) --

MR. YASHAN: Yes. What kind of happened is our workload doubled based on, partly on the reassessment of work between 2000 and 2006. There was a 1996 list, and we went out and reassessed a whole bunch of streams, and in the assessment process, we found like 900 new problems, and those all got thrown on the list; and we started looking at the whole workload that we had to do; and not only are we obligated to complete everything from the 1996 list, we're obligated to complete the whole new list, which back then was like 4,000

which was just 900 off the old list.

And really to do it efficiently and to really spend the money that we have available, resources we have available, it's that list neutral approach that really works the best for watersheds, kind of a rotating watershed basin approach. And a lot of what we're doing in eastern Montana is just building up some of the data bases and information. I think that the river and tributary metals work. So when we get there, it would be a lot better. But yes, it's a different way of doing --

MR. WENDLAND: So they really haven't gone away from the idea of getting it done by a certain date, more so than just getting up and doing it.

MR. YASHAN: It's more of a list neutral, just a continuous process. As I mentioned there, we have 1,597 still to do, which we're shooting for 664 by 2014, you know, hopefully more than that.

MR. WENDLAND: And the other thing, when you talked about the numeric numbers involved. Do you know what I'm talking about here? One of our biggest heartburn things with that is numerics

were just unattainable, when we put numbers in there, that were unattainable -- (inaudible) -- by the Milk River. I mean they were something to look at, but -- and do that.

MR. YASHAN: I think part of the attainability relative to point sources, that's the whole discussion on the process and how that process was maintained as well. What will happen is the TMDL development -- (inaudible) -- TMDL will meet water quality standards, then we'll incorporate that in this process, and hopefully -- (inaudible) --

As far as the numbers in stream, as far as taking the point source out, and look at the numbers in stream, those numbers that Mike's showing, we're routinely pulling water bodies off of impairment status because they are meeting those numbers that are out there. At the same time we're adding more on.

But those numbers, when we look around, for the most part -- there might be some exceptions -- but what we're seeing is that those are attainable numbers in areas where -- I mean look at what natural occurring conditions are. For the wadeable streams, those are pretty good

numbers. Any other questions?

MS. BUCKLIN-SANCHEZ: There was a flurry in the Legislature about what wetland discharges -- and this may actually relate more to Jenny and standards as well -- but what's DEQ's approach with places like Bowdoin, that are man-enhanced water bodies, that release discharges that exceed standards, but there is just limited things you can do. What --

MR. YASHAN: We got involved with work with the US Fish and Wildlife Service on Bowdoin and come up with a solution, the goal being to really avoid discharge -- (inaudible) -- deep injection. Unless you have kind of like some type of natural flood event that's so large that would overwhelm it all, which we haven't seen one for so many years, and all of a sudden we saw one this year.

But in general, that's what they're looking at is the approach that doesn't have a physical plain discharge to either -- (inaudible) --

MS. BUCKLIN-SANCHEZ: Is that being developed in a TMDL process, or is that just their match planning process --

MR. YASHAN: -- (inaudible) -- TMDL process, although we were involved with TMDL's, that was in the back of our mind and the ultimate solution. We have a few ideas on how that might work. But lately -- (inaudible) -- so eventually we won't have to wrap around and look at TMDL development -- (inaudible) --

MR. WENDLAND: So when you talk deep injection, what does that do to the well water? What effect, or is that what you're looking to try to find out?

MR. YASHAN: That's not my area of expertise, but my understanding is that that's something they had to work with EPA as far as finding all the legal perspective, because there are groundwater protection requirements that you have to go way down deep to some existing salty aquifer.

MR. WENDLAND: (Inaudible) I'm sure they dealt with the same thing with Tongue River with methane -- (inaudible) --

MR. YASHAN: I couldn't answer that specifically, but I know that was a big issue, to get down to -- (inaudible) -- regular aquifers.

MS. WILLIAMS: You mentioned one aspect

of why EPA is doing some TMDL's, just because of the workload transfer. But are there other reasons that they are doing them versus DEQ? Like do they -- are they helping the tribes, whereas DEQ isn't, or what other reason for EPA?

MR. YASHAN: -- (inaudible) -- TMDL work with the tribes, but a lot of this goes back to the question where we still have a court order we have to satisfy for TMDL development. That court order is mainly against EPA, so EPA wants to make sure that we satisfy that one way or another.

MS. WILLIAMS: Okay.

MR. YASHAN: Our requirement, but right now that 664 is a negotiated approach that the -- (inaudible) -- satisfying that order. So EPA has a vested interest in accomplishing that. So there is a lot of areas that EPA is involved, so a lot of areas that a person that got hired by EPA is already working, and an area where EPA also took on a major role, partly because of funding -- (inaudible) --

MS. WILLIAMS: Didn't the Legislature give you some flexibility on the deadlines?

MR. YASHAN: The Legislature gave us the flexibility. I think that was probably necessary

for the Court to negotiate, so that flexibility was on like the case in the courts.

MS. WILLIAMS: And the plaintiffs are satisfied with -- I didn't get an absolute answer that the plaintiffs were satisfied with that legislation.

MR. YASHAN: I don't know the answer to that question. I can't speak for them. But you have -- right now as it stands, you have an agreement with the plaintiffs at this stage as far as what this package of work for the next -- 2014 should look like.

MS. WILLIAMS: Okay.

MR. YASHAN: Interesting system.

MS. WILLIAMS: I think they were working on it.

MR. YASHAN: So there is a lot of things that have to come together at once.

I've been doing these updates, I think probably about once a year, something like that, and so anytime that someone wants me to focus on a specific aspect of anything like that.

CHAIRMAN SELCH: Thanks, Dean.

Well, moving on, it looks like we are right on schedule except for the fact that we've

already -- right on Yellowstone oil spill at 1:15. This one Jenny and I are going to tag team. I'm going to give kind of just a general overview of what's been going on, and then Jenny will provide all the intelligent conversations after I'm done.

So I want to just kind of give you an overview. I'm sure a lot of you have read a lot of it in the paper.

The spill occurred on July 1st, and I guess the grisly report, I think it was a thousand barrels spill estimate, and that's kind of been an issue of debate, but I think that's the number everyone is kind of going with right now.

So the spill site was actually right where that pipe was, actually went under the Yellowstone there. And I apologize. I don't have a good mouse to zoom in and out of here. That bridge right by Laurel, in the town of Laurel there, actually the pipeline went right under the river there, and the pipeline that actually broke, it was more on the south side of the channel there.

And so what's been going on since the spill happened was obviously a lot of

coordination, and an incident command center was set up, and initially going to look for where the oil was, they formed what are called SCAT teams, which was kind of funny for people with Fish, Wildlife, and Parks, because SCAT is basically animal feces that we look at for diet analysis. So when we were told we were going to be on a SCAT team, we were really excited.

So initially, when it first happened, though, the spill occurred right at the peak of the -- almost the peak of the discharge this year. It was a 150 year event. And within a few days after the spill, it actually went up a little bit more, and then it's kind of been dropping down. I don't have all the CFS numbers, but I know it's gone down almost over six feet in elevation just since the spill occurred.

So what that did was it actually, because the oil floated on the surface when the spill occurred, a lot of that oil got kind of thrown into the upland areas, into a lot of these back waters, and submerged a lot of these islands as well, and these back water area -- I mean it was a 150 year event, so a lot of these areas are not even typically flooded on an annual basis

unless there is a really significant event.

And so what the SCAT teams do -- and I'll show you a little bit more about that on the power point slide -- is just basically go and document the degree of oiling throughout wherever they find it. So the reaches are all broken up. These are SCAT reaches, A-1, A-2, A-3, and they go down. They broke it into three segments -- actually four, but they're only going to be basically looking at the three, Section A, Section B, and Section C. And I'll kind of show you those here in a little bit.

But I actually got an updated file from the guy that showed all of the areas that had been SCAT'ed, and then I just found this morning that he gave me the wrong file. So this is actually a really old file, but it kind of shows you kind of what information was done.

This initial assessment was just done along the shoreline, because the water was too high to actually get on the river for the first week and a half; and then these areas that were inundated were actually walked transects of the entire property, so the islands, for example, were completely walked once the --

MS. WILLIAMS: So A-9 is -- (inaudible) --

CHAIRMAN SELCH: A-9 would be -- and another thing is they actually took new imagery as well. This is Google Earth imagery, but it doesn't show the high water. So for example, right here in A-9, this entire island was inundated with water, and so A-9 kind of talks about -- they obviously went through this side channel, and do the SCAT assessment on that. But this entire island was also walked, and looked for pooled oil as the water has been going down.

So the initial response was kind of an emergency response, "Let's find any available oil that we can get booms out, absorb right away, before it gets back in the river." Once that was done -- No one is really sure when we transitioned from the emergency response to regular SCAT duties, but once that had kind of been done, and the water had dropped down, a lot of these areas had to be rewalked to look for pooled oil after it had been kind of walked through.

So the initial break, like I said, it happened here right about this location here, so they started picking up this moderate oiling on

the shorelines and on the islands as well, and it kind of hugged that south channel. So if you move down the water into the different sections, you can see where different oil deposited.

Again, this is a really old map, and so they've got a lot more detail now. Each one of those little "I's" will actually give more information about the -- it will talk about what was oiled, and then the different acronyms that talk about the degree of oiling. And then also, so for example, that was blue, so it was no observed oil at that specific location.

Karen, did you have a question?

MS. BUCKLIN-SANCHEZ: Why does oil stick more in certain places -- (inaudible) --

CHAIRMAN SELCH: Well, specifically I mean the oil is lighter than water when it was -- and so before it gets kind of mixed up, and that's kind of a whole other issue of looking for where that oil is that got mixed up with the fine sediments and whatnot.

But it floats on the surface, so you've got that water -- you know, it's a 150 year event. It was just trucking. So that oil would basically settle out, it was lighter, and it would basically

deposit on those side channels. I mean there was slack water pools on those side channels where the flow would be less, and then any kind of debris would get caught in behind, and as the water started dropping down, it would slowly kind of get settled into those slower pooled areas, and then it would kind of collect in those debris jams.

MS. BUCKLIN-SANCHEZ: So the velocity slows on those curves, and it causes --

CHAIRMAN SELCH: Yeah, it would. The main fall way would be the heaviest velocity, and then -- I mean for example, it was all the way up to this road, this road that you can see --

MS. CHAMBERS: And it was heavy crude oil, so it was a lot heavier, and didn't have a lot of viscosity to it. It would just flow through the pipes, you know, the tank, like a liquid or water would flow. It's more blob, tar, tar type, type oil, that didn't have any additives in it to ensure that the velocity or the flow would go a little bit better, so there wasn't any natural -- not natural. I wouldn't call it natural -- but organic crude, heavy petroleum oil that's heavier and thicker. It would float on the top, and then possibly go off into locations.

CHAIRMAN SELCH: And so the spill, at this point they're pretty much wrapping up the original SCAT assessment of the entire area. And just to give you perspective, so here is the spill site here by Laurel. If you kind of go down, those of you who are familiar with Billings, this section goes from "A" to "B" zone is at the Duck Creek Bridge, and there's a fishing access site which is kind of where they're launching all of the boats to kind of move into that.

And then "B" actually goes all the way down to the interstate bridge over the river there, and that's this location right up here, going into "C." And then "A" and "B" were obviously the most heavily oiled; and "C" has been a lot more sporadic, the assessment teams down there, a lot more patchy. There will be areas where you will not find anything, and other ones that kind of settled out in some of those areas.

This is again -- These graphics are from several -- over a month ago now. And the farthest section that I think they had documented oil, at least on the side channel, was actually down in C-53, which was quite a ways down here yet. I don't have the mileage, river mile estimates off

the top of my head. That would have been at that point. It would have been down here. And that's past Pompey's Pillar, down in there.

And the last I heard was that the farthest section that they're going to be actually doing the SCAT assessment is going to be C-88, which that would be the farthest section in "C," and they're not going to be doing -- they've done some assessments down in "D," and at this point, I was actually walking, I walked C-85 down to C-87 on Tuesday, and we didn't find any oil at all at that point.

And this isn't to say that there isn't oil further down stream, or that it's not in the sediments or in the water column down there; but as far as any parts that they would actually have any kind of cleanup set into there, it would be small concentrations that would be a natural attenuation treatment anyway.

So what happens when these teams go out -- there is a contractor with Exxon, and they have a number of different contractors working for them; there is a federal representative, and then a state representative on all these teams, and the state kind of transitions between DEQ and Fish,

Wildlife, and Parks. And so there is someone out there on all those teams.

And then at the end of the day, it's called a CTR, which is a combined treatment recommendation. And so the group as a whole will come up with a consensus of -- they'll document everything they found as far as the degree of oiling, and they'll also come up with a treatment recommendation to do with that.

And then that can range from -- Jenny can help me out -- anywhere from cutting the vegetation, removing, you know, coming in, putting in booms, absorbing all that oil to that degree, also putting -- there was fixative toxins. Actually don't want it transferable, so if there is oil on the bark of a tree, for example, and it's not transferred, they'll throw sediment from around the area on that, so that animals aren't brushing up against that and getting oiled.

And so there is -- those are ATM's, which are approved treatment methodologies. All sorts of different acronyms.

MS. BUCKLIN-SANCHEZ: After you get your SCAT, you go to the ATM's?

CHAIRMAN SELCH: Yes. So just to kind

of back up. These are -- I just did some fish sampling in some of these sections as well. So look at -- sample fish from a human health perspective. I'm still waiting for some of those results back, but everything we've got at this point has been not nondetect in the fish tissue, and that was kind of expected, because this stuff just doesn't show up in fish tissue as much.

So that was kind of a quick oversight on where the spill occurred, and I'll just --

MS. BUCKLIN-SANCHEZ: (Inaudible)

CHAIRMAN SELCH: We haven't been -- That's kind of one of the sampling plan that's getting developed now, is to document the macroinvertebrates and a number of other things as well.

So this SCAT criteria, I know the text is extremely small on this, but this kind of gives you an idea of what people are looking for, and what they're documenting on these SCAT teams. Oil whips, for example -- and I'll show you some pictures that all kind of relate to this -- the distribution. These are kind of percentages, trace, sporadic, patchy, broken, continuous, continuous being pretty much obviously a

continuous band of seeing the oiling.

The thickness, if it's pooled or really thick oil, if it's covering or coating the vegetation. A stain would be if the vegetation, you could see the oil on the vegetation, but it was kind of transparent. You know, you could see it on there, but you could see the green vegetation through it, or just the light film, and then the oil character.

A lot of these -- what happens is the longer you go, a lot of the -- (inaudible) -- will burn off, and it will turn into more of a tar, almost like a road tar you would see on the road, as things burn off, and it kind of dries up.

MR. WENDLAND: Are you seeing oil film continually going down the river, though, from any of these?

CHAIRMAN SELCH: You know, not for the most part. I mean it happened during high water, and a lot of that oil got pushed up on those upland areas, and then by the time we got out there several days after -- I mean people literally couldn't get on the main stem for, I think it was a week and a half after the spill -- because it was just trucking -- from the safety

aspect of it. So initially that first week, we were kind of going in those back water channels with john boats, and kind of scouting it from here, and looking for real movable oil.

I'll show you some pictures, and basically in those back water areas where you'd see the actual hard oil, or you would see the oil sheen on the surface of the water that was visible. Jenny, did you have anything to --

MS. CHAMBERS: Yes. I think it was really surprising when you did SCAT in this area -- I'll show you some of the pictures -- where you can walk for 50 or 70 yards and not see anything, -- (inaudible) -- area or sustained vegetation on some areas from high water. And the waters were four to five times higher CFS value, based upon -- (inaudible) --

And when you talk with the EPA on scene commander, they basically stated that was a good time of year for it to happen, because it really did dissipate, and really did spread, get up on the higher ground area, so it would be more manageable to be cleaned up, versus if were in a low flow condition, it would have pooled a lot more, and would have been harder to clean up

options associated with that.

CHAIRMAN SELCH: And it sounds kind of -- It's kind of the way you look at it. It's good that the water was high, and that it kind of captured it; but it's bad in the aspect that now it's all there, and we've got to clean it up, and there is a lot of people affected. These are core back water channels that are critical for spawning, kind of wetland environments; and then a lot of actually agriculture got flooded out, and they'll be making individual claims, and they make their own decisions on their cleanups on the private land and stuff like that.

So some of these pictures are hard to get in context without seeing the whole thing, but this is actually a few days after the spill. This is right on Thiel Road (phonetic) there, so if you went over the bridge right by where the spill happened, just up there, the water was right up to the road. And these are just some of the booms that were out there. And the water was extremely turbid, so this isn't actually oil that you're seeing. This is just the turbidity water.

But some of the grass is stained there, and a lot of it has already been kind of washed

down, or you can see a little bit of the browning on the booms there.

But this was the same day. So you can see how the background is all just turbid water, and you can see the actual oil film just kind of persisting in those back water areas. And so you can see the water isn't really moving. The river is going at 150 year event, and in these back waters where it's flooded out, the water is kind of pretty stationary, and not really moving, and so that's why the oil kind of just kind of flows into those areas.

MS. WILLIAMS: So is it soluble? Everything that's spilled is going to be sediment, is going to be intact, floating?

CHAIRMAN SELCH: No. And initially it's lighter than water, but as it burns off, and the -- (inaudible) -- burn off, then it starts sinking into the sediments, and I'll kind of talk about that a little bit as well. And it also will bind to a lot of those sediment particles, and that's one of the key things we're looking at is, okay, we've got "X" amount of oil that was spilled, we've recovered "X" amount -- which is probably pretty minimal -- where is the rest of it? It's

either bound up in sediment, washed downstream, or it's buried in a lot of these sand bars that are -- with all of the erosion and deposition that happened.

Here is an example of some willows and young cottonwood. This is in the back water area there pretty close to the spill site. And I've got some better pictures here. But when the water was really high, it actually would tip those cottonwoods over, and then you would see oil on the cottonwood. It would stand back up until it's black. It would just be sitting there like a flag in the water, but yet some of the vegetation -- and even cottonwoods ten feet away of the exact same height have no oiling on them, because that glob of oil kind of hit that one tree, and then the other ones didn't even get touched. That's just kind of the same example, a willow.

MR. SALLEY: How many gallons of oil, do you know?

CHAIRMAN SELCH: It was a 1,000 barrels.

MS. CHAMBERS: 50,000 is what they -- (inaudible) -- about 42 gallons per barrel roughly, and estimate between 1,000 barrels and 1,200 barrels -- (inaudible) --

CHAIRMAN SELCH: Here is a picture of where you can see the band of actual oil there where it hit and dropped off, and kind of see how much it's even dropped, and this is just within a -- this was taken like the second week after the spill, and you can see how low the water is dropping even at that point.

Here is just another example of the -- you can see it got coated, and you can see some of the vegetation even behind it didn't get hit. Here is one where it's flat right on top, and then a lot less there down below.

Here is some leafy spurge that got hit, which I wouldn't mind it taking out the spurge, but you can just see how thick it was up in that area. That was up in that Section A. And you know, that would go back quite a ways. That's what you would see from the boat. But obviously this is the initial assessment, that first or second week there, so obviously they'd gone back, and they'd looked behind the shoreline to see if there was poolable oil back in there.

That's kind of -- some picture there. Here is what you'd find kind of more on the islands, so once we could get on the islands, and

say we're walking on an island, and you see this little band of oil that would be coated on the grass, and so the oil -- the island was flooded out, and then as it receded, this was the level that kind of hit that grass, and stained it. Then the oil went back.

And initially there was a technical advisory group that gets together and talks about these approved treatment methods that they can go out to remove these things, and initially there was a lot of discussion about leaving it to natural attenuation in certain instances of where we didn't want to go necessarily remove all of the vegetation off of an island, but the more discussion is that we didn't want that to be available or transferable to critters that are crawling through there as well, and so a lot of this would be actually weed whacked, and the grass has actually grown back quite a bit.

I was just on some areas where they weed whacked a lot of these several weeks back, and the grass has grown back up, and it's not as visible, but there is still oil in the soils and stuff that they couldn't remove.

Jenny, do you have any other comments?

MS. CHAMBERS: They're removing the vegetation by cutting it, or tree barks, and then they're taking them off -- (inaudible) -- and disposing of the contaminated vegetation. A solid waste is non-hazardous waste.

CHAIRMAN SELCH: They have huge boats out there, these huge barges right now, with twin 200 horse jets that are moving all the bagged material around, and they have got -- actually most of these islands actually have tents set up on them, they are setting up with people that are working out there, they've got meals, they've got vehicles to move people around the islands, and move these bags off the islands. So it's quite a production.

The island that I went on the other day, they welcomed you to the island, he said, "Welcome to Fantasy Island." They've got like a little town out there.

MR. SALLEY: So the soil isn't going to be treated at all.

CHAIRMAN SELCH: No.

MR. SALLEY: -- (inaudible) -- vegetation.

CHAIRMAN SELCH: No. I think the

state's perspective is we don't want do more damage than good when we do this cleanup, and so that's kind of what the groups have been deciding when they approve these treatment recommendations is we're walking kind of a fine line, and it's like we want -- in a perfect scenario, we would want to get it all out of there, but we don't want to be going in there, and dredging and digging up all this stuff.

I mean it is organic. The microbes and bacteria will break this stuff down eventually. But like there will be -- More than likely we're going to obviously be evaluating the long term ecological impacts of that, but --

MS. CHAMBERS: But there's a soils and sediment plan that they developed, I think they were going to start working on taking some samples last week, so that would be kind of a long term process that goes forward; and then after the initial cleanup and initial response -- (inaudible) -- are going to go through some of that, who is responsible now, based upon what regulation, and kind of where that transition point is.

And then it will go to the state, mainly

DEQ, for long term planning and impacts that will coordinate with Fish, Wildlife, and Parks and DNRC on what the soil sampling results come back on, any other water quality impacts that we want to evaluate, how we're going to manage and look at the long term restoration and monitoring based on the impacts long term within the state, and that will be mainly handled by the Remediation Division, and it will be transferred from a Clean Water Act emergency response activity under EPA authority under the Oil Pollution Control Act, and Clean Water Act, back to Remediation for long term monitoring, evaluate the natural attenuation process, and see whether or not it meets state standards as we move forward.

CHAIRMAN SELCH: You can see that band of oil there just below the trees, just as an example of what you'd see on one of these islands. There is an example of kind of a band that would be on a tree, and something like that. They'd actually have the absorbent pads, and get any of that oil off with a pad if they could, and if they couldn't get any more, and it was nontransferable, they'd try and use local sediment to try and put that on there so nothing is transferrable to the

wildlife.

MR. HOEHNE: Rub dirt on it.

CHAIRMAN SELCH: Throw dirt on it.

MS. BUCKLIN-SANCHEZ: Fixative.

MS. CHAMBERS: Technical term.

CHAIRMAN SELCH: So here is kind of an oil water mixture there. You can see how thick black. That's fairly obvious. And then there's some sheen on the bottom. And that's what ultimately -- I mean the Yellowstone is the longest natural running river in the nation right now, and so there is a lots of -- it actually moves sediment, and it moves debris on, like a lot of these other impounded rivers.

And so what happens is you have a lot of obviously cottonwoods moving down, and so what we're finding now is that's where that oil is pooling up. It's sticking in behind these debris jams and logs, and that's where you look and find a lot of these oil deposits.

Here is an example of when I was actually on the SCAT. This kind of gets back to Kathleen's question about being on the service. There was actually no oil here, and we actually pushed our paddle to kind of push us off this

bank, and that's what kind of came up. So that just shows you that it's not just on the surface. Once it burns off, it gets heavier than the water, and it will sink into the sediment.

MS. WILLIAMS: Burns off meaning in sunlight?-

CHAIRMAN SELCH: Yes, and the sunlight will burn a lot of the volatile.

Now, the pictures from this point forward are ones I took this week. This is the very first depositional island below the spill, and I could show you back on the Google Earth map there. This was a huge debris pile, and they've actually been working on this debris pile for weeks. What they found was -- this was probably ten, fifteen feet tall of cottonwood and root wads, and what they found was a lot of that had absorbed a lot of that oil, and in the heat of the day, it would actually be dripping out, and there would be a huge pool of oil beneath those debris jams.

That's kind of one of the biggest things they're dealing with now. They've got hundreds of these debris jams, and here we are in the middle of August, and snow is coming, and who know,

October, November, and stuff, and they've got to work through a lot of these debris jams. It takes a lot of effort to move this stuff out. They'll use chippers. Any of the soiled wood, they'll actually be chipping it up, removing it. And here they just continually put down these absorbent pads and remove those as well to absorb all that oil.

There's just another picture of a -- this is just on the other side of that same debris jam. You can see a guy working on some small equipment there in the background, and you can just see the size of the logs and debris that they need to work around to get at that oil that's underneath.

That's just an example of some more of the oil that's just sitting out there in these pockets.

This is more indicative of an island. These little tiny patches that you'll find, and so you'll walk -- any debris or any spot that could have held that oil as the water was receding, you'll just find these little patches of oil that they have to go clean up.

And there is some oil right above --

this is one of our biologists' head there. You can see there's the darker stain on that debris jam. So not only is it below, but there is a lot of stained vegetation. And there's guys literally picking through that entire debris jam and removing -- obviously cleaning versus oil, and they're removing all the oil stuff and leaving the clean stuff behind. And that's all being quantified, the amount of debris that's being removed.

And of course, we've got eagles all up there keeping an eye on us. But those are some of the pictures I had. Jenny could expand on things.

MS. CHAMBERS: You talked a little bit about the SCAT process, and how they went through and provide the recommendations for the cleanup, treatment recommendations, the combined treatment recommendations.

Then the operation team will send a cleanup crew in there to do those recommendations, and they'll brief, get those areas reSCAT'ed.

So once they go through, and they say, "Yeah, we've cleaned up --" get in accordance with the recommendations, they'll send a reSCAT team in to go through and say, yes, were they met, and was

it cleaned up in accordance with those recommendations, and then it will be signed off as a target end points document that, yes, the oil has been found and removed, and then maybe this is another area that we need to add to long range planning document for future review and evaluation as it moves forward.

Currently EPA is the primary control over the cleanup and the Clean Water Act. They have an order to Exxon that they would get this cleaned up by September 9th, is the current target date for all of the areas that are moderate to heavy oiled areas. That's the authority under the Clean Water Act that there's a possibility or an actual discharge to State surface waters under the Federal Clean Water Act authority.

They may change or modify that date so they know where they're at that first week in September, but predominantly, the emergency cleanup under the Clean Water Act will be done hopefully before the snow flies, and then all of the SCAT'ed areas will be reSCAT'ed, and then taken off the list, and then it will go into the long range planning to move it forward.

There's like five or six documents

currently on the books as far as the plan that Exxon, and the State, and EPA on soil sediment monitoring, ground water monitoring, public drinking water, intake monitoring, and sediment basis monitoring, land owner monitoring based upon complaints, evaluations. So we've got a ton of data that we're sharing between Exxon, EPA, and DEQ, and those are going to continue as we move forward on evaluation and determining what impacts are going to be long range.

So that's kind of in a nutshell. So it's been an interesting process, take a lot of the staff time. I know Fish, Wildlife, and Parks, they have been -- quite a few folks. DEQ is the lead agency, so we've got folks on our SCAT team down there, and then we're also managing the in-state plan, so there is about six of us from the manager side that are rotating down at the incident command, and ensuring that we're keeping all the other state agencies in coordination, or addressing citizen complaints, or items that we need to in order to keep this rolling, and keep Exxon accountable for anything that they need to do to maintain this is in operation for process, so --

MR. HOEHNE: Is there a point down the road that Exxon gets out of this, and somebody finds something that they missed a year down the road, are they still going to be accountable for it, or --

MS. CHAMBERS: That's our main point right now is to do everything we can now, make sure we get everything in requirements, or planning, or sampling effort, because they've got the manpower down there. They've got the operation team, they've got their logistics, they've got all of their sampling folks ready to get those operations. So with any of the remediation type activity or cleanup efforts that are needed, they will always be the responsible party that would be either under order in the future, because we didn't address something, or --

But they've been pretty willing to do it under just, "What do you want us to do? We'll move that forward without being ordered to do," whatever we would ask them to do, but that's always a tool of the tool box to -- (inaudible) --

MS. WILLIAMS: So if this had been refined product, would the threats be worse?

MS. CHAMBERS: Yes, I believe so.

There's a lot more additives, there's a lot more metals, there's a lot more chemicals in refined oil that would have more sediments and aquatic life impacts definitely associated with those. It wouldn't -- might not flow as easily, or it might have been actually determined -- all this waste product would have been hazardous waste.

At that point right now, they're able to manage it as a solid waste, or even composting. They're looking at composting of the chipped material, the vegetation material, which you could work as a composting type practice. So a lot of that would have changed based upon the type of material that it was.

As you may be aware, they're looking at the Governor's Office to do that pipeline safety, and DEQ, and all the other State agencies are part of that, so there's going to be a lot of action, and a lot of what can we do in the future to prevent this stuff from happening, and what kind of regulations do we need. But it's kind of all up in the air right now, but we're just trying to get this one contained, work with the reporters, the stakeholder groups, to figure out what our regulations are, based on what parts and what

pieces, and are there any gray areas that we need to address.

CHAIRMAN SELCH: Any questions from anyone else?

MR. HOEHNE: Did you find any dead wildlife or anything like that?

CHAIRMAN SELCH: You know, they've had the international bird rescue folks looking for water -- not just birds, and they have found a few things, a lot of oiled birds, and a few oiled other critters, and stuff like that.

With regard to aquatics, it was flowing so fast and so turbid, it would have been almost impossible to try and document anything. We did do a lot of investigations, and didn't find a whole lot.

But you know, based on the literature, it's going to be the long term impacts that are going to have the biggest effect, because it is less likely, because of the volume of the Yellowstone River, it is less likely you're going to see an acute event on a fish living in the river, but long term, it's settled in all those back water habitats, it's in the -- (inaudible) -- environment, which affects -- (inaudible) --

macroinvertebrates.

And the biggest effect on fish would be on reproduction, when they lay their eggs in there and the larvae, that's where it kind of hits them. So you can have longer term reproductive impacts on fish populations and communities as well, more sensitive species as well that are affected.

So we're doing -- there's a project. We're even looking at that right now as well.

MS. WILLIAMS: What's the effect on plants, whether it's crops, or riparian corridor, or cottonwood regeneration, or -- Is it just an impediment, or does it actually --

CHAIRMAN SELCH: I'm not as familiar with that. I know there has been agriculture documents that have been produced that are for the ag folks, and I know I've seen there's cottonwood seedlings coming up right now in a lot of these islands that we're just going back to right now.

MS. WILLIAMS: (Inaudible)

CHAIRMAN SELCH: So I think the dilution factor was quite a bit, but at the same time, it's regrowing fairly fast. I think from the regrowth, they might be okay, and this is just speaking off the -- but as far as agriculture, that's kind of a

bigger concern when you're dealing with a food crop.

MS. CHAMBERS: They've had the MSU extension ag folks down there that have consultants that are in that practice to come up with an agricultural plan based upon what those private landowners want to do with their hay crop or their fields in a particular area. Some of them are getting it cut, and they're removing the whole crop, and taking some soil samples to determine what the impacts are later on.

I think that claims is actually paying those farmers for the next two seasons of crop that they may have impacts associated with, so they're getting compensated, I guess, for some of their losses. There is a different category based upon what they're growing there. So I know hay has different impacts than if there was some kind of food product that's for human consumption versus an animal.

But the private landowners for the most part have been pretty okay with what the direction is that they've got from ag contacts, and the Department of Ag. actually sent down there a couple of patients and did some evaluations. And

then from DEQ's viewpoint, we just wanted to make sure there's sampling of the soils, but nothing to be resurfaced, as was pointed out later on in the actual fact of water contamination, but if it meets soil sediment criteria, we're going to sign off as being okay, and from the agricultural end.

CHAIRMAN SELCH: From an aquatics perspective, too, a lot of these workers that are coming up all came up from the Gulf Coast, Louisiana and Texas. And so when they all came out here, we have our aquatic nuisance species coordinator. We have a position there to decontaminate the boats so they're hopefully not bringing anything in. So that will be -- but with all of the moving around between the islands, and the vehicles, and the people, there is a potential for moving a lot more of these invasive things around, and so that's one of the things that's going to be evaluated as well.

MS. WILLIAMS: Cajun -- (inaudible) Thanks for sharing that.

MR. YASHAN: Any other questions from anyone?

(Inaudible)

CHAIRMAN SELCH: Five minutes

preparation. We'll have a quick five minute break here for folks, and then we'll continue on with Art Compton's SAR and EC.

(Recess taken)

CHAIRMAN SELCH: Is everyone back? Okay. Our next briefing item here is from Art Compton, and he's going to talk about EC and SAR stuff.

MR. COMPTON: I think I was assigned 15 minutes. I don't think I'll need that long, but I'll be sure happy to entertain any questions.

As you will recall, in the recent litigation over Montana's water quality standards for conductivity and SAR, the State prevailed in the State litigation, the Wyoming producers prevailed in the federal litigation, and Judge Brimmer in Cheyenne remanded those standards, those salinity and sodium standards, to EPA for reconsideration.

At the same time, we were embarking on our triennial review of water quality standards, which I know you've heard plenty about. As an element of that review, we made a special solicitation for public comment on our EC and SAR standards, and to support that public comment, we

compiled and posted about 40 studies and new research efforts on coal bed methane produced water and its effect, and posted them for the public to read and, again, help support public input in a 60 day comment period that closed in June of 2010.

Once we had, we reviewed all those 40 studies and assimilated public comment, we updated our 2002 technical basis for that rulemaking which the original rulemaking was in 2003, and came up with what we called a review of the rationale for EC and SAR standards.

It is essentially an updated version of that 2002 technical basis. It's quite a bit broader and deeper than the original technical basis. I think the first technical basis was 17 pages, with maybe a dozen literature cites. This one is about 45 pages with about 50 literature sites.

What we attempted to do was bring in all the applicable pieces of new literature that had been published, studies that had been performed since the original rulemaking, and again then incorporated into our responses to applicable public comment.

So I'm going to pass this copy around. On it, on the cover, just now I wrote the web address for the downloadable PDF file, hoping that most of you, an electronic version would be all you need. Somebody can keep this, this hard copy.

UNKNOWN SPEAKER: I think we all have a hard copy.

MR. COMPTON: You guys' usual way. Just for your information, the way you retrieve the downloadable one, this is the DEQ basic home page; this is deq@mt.gov; the left lower hand corner, "Water Quality Info;" and then you can see the second item under "What's New" is this document, the final rationale. And I guess you guys have already got it.

So that's pretty much it. We do not have a time frame. Oh, and along with this document, we formally submitted that to Region 8 EPA on July 18th. In telling us what they'd like us to submit, they also specified the Board transcript from the May 13th Board meeting, in which the Board deliberated this document, and gave the Department some direction on where to go from here, and the Board --

We had recommended to the Board that the

standards, the numeric standards themselves, the nondeg approach, the numeric nondeg approach, the way the standards were developed, and the implementation measures we were using to administer them. The Board found that those were appropriate, with this new look at the science, and determined that no additional rulemaking was necessary.

So that's what we told EPA. We're asking you to reapprove, if you will, our 2003 numeric standards and our 2006 numeric nondeg rulemaking, ask you to reapprove those two entities with the support of this new information.

We do not have really a projected time frame that we'll hear back from EPA on that, but Bob has received some feedback from Water Quality Standards in Denver that they are going to take an in-depth look at our technical basis, they're going to do probably some additional technical work on their own, and so we do not expect to hear back from them in any immediate time frame.

I can't tell you whether it's going to this fall, whether it's going to be the end of the year, whether it might go into next year. We're just not sure.

In fact, I'm not sure that Region 8 is sure. I think, as Bob and I discussed it, right now they're kind of getting their arms around this, and those 40 studies that we drew from, and I think they want to familiarize themselves pretty thoroughly with all of that information before they respond in kind of their own technical basis that we suspect will support their approval of those standards, but again, we don't know how long it's going to take.

So that's pretty much it. I'll be happy to entertain any questions.

MS. WILLIAMS: So EPA lost because the plaintiffs asserted there wasn't a sufficient scientific basis; is that --

MR. COMPTON: Kathleen, Mr. Chairman, Kathleen, they basically -- Yes. Essentially what the Judge in Cheyenne said was that EPA didn't show their work. I think in State District Court, we were challenged on our technical basis, and the State District Court and the Montana Supreme Court found in Montana's favor.

What the federal litigation was EPA being sued over their approval letter, which is, what, about four pages long, and they really did

not go into the technical -- in their first approval letter in 2003, and their second one in 2006, they did not go into a great amount of technical detail, and the Federal District Judge in Cheyenne said, "You need to show your work." I think the term he used was "You need to make clear your course of inquiry."

And so I think that's one reason we're going to see a pretty extensive effort from Region 8 this time on kind of their own technical basis, which will draw from ours, but probably go farther from ours or in addition to that.

MS. WILLIAMS: Will that be precedent setting? Now EPA will have to do all their own work when they approve state standards?

MR. COMPTON: In other words, will they have --

MS. WILLIAMS: Will EPA now have a lot more work to do when they approve state standards?

MR. COMPTON: I think that's the way they see it, that they are determined to do -- Bob may have some additional thoughts on this -- but I think they're determined to do a really in-depth technical basis for their approval, which again is where their approval is now lacking.

MS. WILLIAMS: Then are the standards enforceable while this is being sorted out?

MR. COMPTON: That's correct. They are in full force and effect in state, for our in-state discharges. They do not affect upstream states under the Federal Clean Water Act until they are reapproved by EPA.

MS. WILLIAMS: And if they were effective upstream, would that affect Wyoming's land uses and discharges?

MR. COMPTON: Are you asking will they affect Wyoming discharges?

MS. WILLIAMS: Yes.

MR. COMPTON: You know, probably not, and the reason for that is despite the fact that the State rules were remanded to EPA, and therefore are not in effect across the border, Wyoming DEQ has not changed their way of doing business.

I think they used two approaches. On the Tongue River, where they have very little development, they write their permits to try and ensure that by their standards none of that water is going to find itself at the main stem of the Tongue.

On the Powder River, where the vast majority of Wyoming's CBM production occurs, and where the lion's share of the produced water is discharged, they use what's called assimilative capacity approach.

They have looked at our existing water quality standards at the border; calculated month by month how much room they have to discharge before they bump up against those standards; they've taken that assimilative capacity, as we call it, that wiggle room; they've allocated among their producers according to how much land surface each producer has under lease.

And so that is how they administer Powder River permits where they calculate that some discharge water will reach the main stem of the Powder, and that is to meet Montana's water quality standard at Morehead, at the border.

So that's the two approaches they're using in the Tongue and the Powder. They have not changed that approach because the rules are -- on account of the rules being remanded, I think either because that system gives them a little bit of certainty, or because they suspect that they're going to be reapproved. So again, we have not

seen any change in Wyoming's permitting math, the issues that drive their permit math, since the remand. They've kept it business as usual.

So no, I think if, as we expect, these rules, our standards are reapproved, again, I don't think Wyoming will -- they haven't changed anything as a result of the remand. They won't have to really change anything as a result of the reapproval.

CHAIRMAN SELCH: Any other questions for Art?

MR. COMPTON: Thanks so much.

CHAIRMAN SELCH: Thanks for coming on a Friday.

Next on the agenda -- it wouldn't be a WPCAC meeting without hearing from Rod, so I see he's got a big stack of books, and lots of fun stuff to tell us.

MR. McNEIL: The past couple of sessions I've talked to you about various aspects of DEQ7, and today I wanted to discuss with you required reporting values, and the revised human health criteria that we're proposing for probably DEQ7-2012. Just calling it 2012 because that's where we are.

The RRV's -- This is a direct quote out of DEQ7-2010 as to what constitutes an RRV. Basically the RRV values are the values which the laboratories have to meet in order to be able to report results. In order to derive the RRV's, I'll quote here, "RRV is the Department's best determination of the level of analysis that can be achieved by the majority of commercial, university, and governmental laboratories using EPA approved methods or methods approved by the Department."

Now, we've only had a relatively few number of RRV's in DEQ7 to this point. This rework is fairly major, and posting proposing 246 new requirement reporting values. Now, to derive those values, protocol is that we contacted a number of major regional and local labs, and got a list from them, and just to give you an idea of what we're dealing with here, here is their response.

What this is is a list of all of the procedures that they performed for each of the items in DEQ7, and then their minimum detection levels and their minimum reporting levels for each of those compounds for each procedure. So for

instance, for something that's fairly common, like say ammonia, there might be 30 or 40 different procedures that they might use to report this analysis.

So we restrict this to methods that are EPA approved under 40CFR136, and the problem is that if we look how the labs make those analyses for what they call their minimum reporting values, it varies from lab to lab. All the labs agreed on MDL's, minimum detection limits, and so that's the basis on which we started to make our analysis and to do recalculations.

So we use the MDL values presented by the labs, and we calculate the 75th percentile for all the submitting labs, and then we multiply it by 3.18 to calculate the required reporting value. But the value of 3.18 is a statistical screen to describe a level above the -- (inaudible) ratio.

So while they might be able to detect it at some much lower level, we want to have some confidence that the number that they're reporting is reproduceable, and 3.18 number was derived and provided by the EPA in this document that's described to you, Revised Assessment of Detection Implementation Approaches.

So that's the procedure that we used for doing the calculation. So now we've got an RRV value, and we had to set up a set of rules on how to use the RRV's. So the first rule is if the calculated RRV is more than 10 percent of the most restrictive standard, the calculated RRV value would be listed.

So this would be a case where the procedures are up to the task of measuring to some value less than 10 percent of the standard. The recommendation from EPA is that the procedure should be utilized which allows reporting down to a level of 10 percent of the standard.

In many cases, with some compounds that are on our DEQ7 numerics list, no procedure exists to quantify at levels that low. So Rule 4 would cover a situation where the RRV is more than 10 percent of the restrictive standard, so we would use the RRV value. If the calculated RRV value is below 10 percent of the most restrictive existing standard, a value equal to 10 percent of the most restrictive standard would be listed.

So this meets the criteria for the EPA, and satisfies our requirement for being assured that the standard or method being used is

sufficiently sensitive to quantify the levels that we're interested in.

We have a couple of other cases, one of which was No. 6 here, "All labs report values above the standard for all EPA listed methods appropriate for that compound," and dioxin is an example of this. "The individual minimum detection level which would derive the RRV closest to the standard will be used to list the RRV."

Now, the carcinogenic standard for dioxin is three times ten to the minus six micrograms per liter, a level so low that there is no analytical procedure that's capable of quantifying at that level. This is an extrapolation to estimate the carcinogenicity limits for the compound, and that's how the standard was initially derived. So all we can do is pick the most sensitive technique commercially available, and use the minimum detection level that that lab used of reporting for that analysis.

The final case that we have to cover is if no labs in the survey reported MDL's for a given compound, the existing RRV value remains or is replaced with a value equal to 10 percent of the most protective standard listed for a

compound.

Here is an example of arsenic. Arsenic's level is ten micrograms per liter. You see the values that were reported by five labs. We had six labs that submitted to the study. In this case, only five quantified arsenic. These are their minimum detection limits. Based on that, our derived RRV was .0064.

Well, 10 percent of ten micrograms per liter would be one microgram per liter, so the sensitivity availability of techniques is far more sensitive than the requirement for reporting on arsenic. So in this case, we set the standard at one microgram per liter. This is higher than the derived RRV. Rule 5 applies, so the RRV was set a one microgram.

For benzine, the standard is five micrograms per liter. You can see the values derived here. And the RRV value derived from the calculation is 1.6 micrograms. Since 10 percent of the standard is .5 micrograms, and this is lower than the derived RRV, Rule 4 again applies, and the RRV is set at 1.6 micrograms per liter, the value that all labs met.

We do have situations where the values

are sufficiently low enough that some labs are limited. In other words, in this case carbon tetrachloride, the standard is 2.3 micrograms per liter. We had five labs reporting calculations for minimum detection limits. The derived RRV value from that set is .32 micrograms per liter. Since 10 percent of the lowest standard would be .23 micrograms per liter, and this is lower than the derived RRV, Rule 4 applies, and then the RRV is set at .32 micrograms, a value that four of the five labs that reported would meet.

So we're basically setting the bar here with RRV's to show the labs what levels they have to use to achieve sensitivities low enough that we're comfortable and confident in their results. And secondarily, if the lab can't meet that standard, it sets a goal for them in terms of looking at new and different procedures, or to add their repertoire, or improving their internal laboratory quality control such that they can meet the criteria for the RRV.

The list that you have in front of you lists all the labs that reported their individual MDL's, as well as the calculated RRV values. I'm hoping to come back to you in November with this

as an action item as a portion of the DEQ7-2012 update. So I wanted you to have that opportunity to review this, and sort of wrap your head around RRV values.

The second section of this that I want -- First of all, are there any questions on RRV's, how we calculate them, why we have them, any aspect?

MS. BUCKLIN-SANCHEZ: I have a question. So you're basing the RRV on the minimum detection levels based on that, but some of them are using different techniques than others.

MR. McNEIL: These are all based on the same technique.

MS. BUCKLIN-SANCHEZ: I understand. Okay.

MR. McNEIL: So we select -- I guess I'll call it a standard technique which is EPA approved, and then look at that technique for all of the labs.

MS. BUCKLIN-SANCHEZ: And there are multiple techniques for some compounds, but for these, you require one technique.

MR. McNEIL: Yes, we used that for calculating RRV.

MS. BUCKLIN-SANCHEZ: Thank you.

MR. McNEIL: That's sorting wheat from the chaff, so to speak, because there's the other 39 procedures that won't meet the criteria in terms of either there isn't an EPA approved procedure, or it isn't sensitive enough for the standard established in DEQ7.

Moving on, this year's changes in human health standards comes from a large number of directions, so I wanted to try and give you the opportunity to ask any questions you might have on this.

The human health standards are either coming from 304(a) criteria, the MCL's, drinking water standards, or human advisories which are calculated for pesticides not covered as MCL's, 304(a) criteria. So we've got three sources of information, and there are seven classes of changes that we had to human health criteria this year.

The new MCL standards for aldicarb sulfone, bromate, chlorite, haloacetic acids, and dichloroethylene. Then we have a revised standard for alpha emitters. They actually increased the standard from 1.5 to 15 picocuries, so we're

essentially adopting a correction revised standard.

We have a new 304(a) criteria that was introduced for hexachlorocyclohexane. This is a complicated compound, in that it has a number of isomers. We've got four isomers, and then we have technical grade hexchlorocyclohexane. And they have -- if you jump down to five, you'll see that we've deleted the 304(a) criteria for delta-hexachlorocyclohexane.

The reason we deleted it is that they haven't published any values. They say it's a carcinogen, but they don't have any numerics assigned to it yet. So we're just dropping it from DEQ7. There's no point of listing it if we don't have a number to go with it.

The trichlorophenol is a standard that we adopted just last year, but they published a new finding in terms of quantitation for that compound, so we're updating that to reflect a new standard.

Then in the human health advisory area for pesticides, the Montana Agricultural and Chemical Groundwater Protection Act detected two new pesticides in groundwater supplies this last

year, Fluroxypyr and Pyrosulam, and so we had to develop standards for those to meet the legal requirements here in the state, and we developed those standards in conjunction with the EPA.

We don't do that in a vacuum. So we do the initial calculations for case studies, etc., and submit those to the EPA, and then say we agree or we disagree because. And fortunately for us this year they agreed with our findings, so they had no objections to any of our calculations.

Then the seventh category is revised human health advisories. These compounds were adopted quite some time ago, at least 12 years ago, and the source of information used for deriving the standards is now out of date, and there is considerable new scientific information available for all these compounds, so we conducted a review; and of the eleven, ten have changed substantially in terms of the source information. And the calculations that we've done are now EPA approved as health advisories.

So if you looked at an old copy of the DEQ7, you'd see these listed as ag class, or the source of information as "I," which was internet information prior to 1998, which was pretty

non-specific. So to increase the rigor, I guess, scientific rigor for these, we've now -- I guess I'll say -- raised the bar, and reissued these, and proposed to reissue these as a health advisory, two health advisories that are approved by the EPA. And so they approved, and we've received a letter verifying our calculations.

So those all appear in your copies of DEQ7. So a little more complicated than usual. Typically we are just adopting one standard for one location or another, but this year we've got seven different classes of changes to human health criteria, with a total of 20 compounds that are being altered or added, so you need some time to wrap your head around that.

MR. HOEHNE: When you say you're changing the standard, you're just changing what classification they're being listed at?

MR. McNEIL: No, the numeric is actually changed.

MR. HOEHNE: What's changed in the numeric standard? Are they all restricted or --

MR. McNEIL: For the pesticides, yes. The ten that changed all became more restrictive.

MR. HOEHNE: The ones that kind of stick

out to me is the haloacetic acids. (Inaudible)

MR. McNEIL: Okay. Haloacetic acids were proposed for drinking water supplies because the haloacetic acids are a byproduct of chlorination, and it was EPA's recommendation we consider adopting these. There are MCL standards that exist for these, so it is a question of adopting the standard.

MR. HOEHNE: So the numeric, the number that we're using right now is just -- (inaudible) --

MR. McNEIL: We don't have a number. These are new standards. So we don't have a standard for haloacetic acids at this point -- (inaudible) --

MR. HOEHNE: (Inaudible)

MR. McNEIL: They're not quantifying it unless it's been required under a permit issued. In Jenny's shop, they might have a requirement to do analysis to meet federal standards. There is no state standard.

MR. HOEHNE: (Inaudible)

MR. McNEIL: Okay.

MR. HOEHNE: So what is going to -- (inaudible) --

MR. McNEIL: It's not going to do anything because the standard is the same.

MR. HOEHNE: It's the same. Okay. Thank you.

MR. McNEIL: Just to get it on the books.

MS. BUCKLIN-SANCHEZ: Why did the alpha-emitter standard increase to allow more?

MR. McNEIL: It doesn't happen very often, but if you review, the scientific information simply showed that the cause for concern at the lower levels that they had previously was unjustified. Since the original standard was developed, there is probably almost 25 years more scientific data and health studies that have been conducted. So it was just a question of the amount of scientific information that's available.

MS. BUCKLIN-SANCHEZ: Okay. Human health hazards?

MR. McNEIL: Yes, to assess the human health hazards.

MS. WILLIAMS: Actually this is a facetious, but I was curious whether hexachlorohexahydroendoexodiamentananphalene

(phonetic) is the longest element on the list.

MR. McNEIL: Maybe.

MS. WILLIAMS: Sorry. I couldn't resist.

MR. McNEIL: You get an award for reading it.

MS. WILLIAMS: These are all manmade compounds?

MR. McNEIL: No. DEQ7 includes things such as the natural elements, like selenium, or arsenic, or cadmium, or chlorine, etc. But the vast majority of these are chemical compounds that are in -- (inaudible) --

MS. WILLIAMS: (Inaudible)

MR. McNEIL: To make things really difficult, if you go look that up, the EPA calls it something else.

MS. WILLIAMS: Oh, great.

MR. McNEIL: So what we have to do -- that's where the CASRN numbers come in, because with a CASRN number, it's just one number. Regardless of whatever you want to call it, that CASRN number refers to the same information base.

So it's critical to have that information because many conventions in science

have changed over time, and if you say DDT, and were born after -- or you went to college after 1980, you don't know what that is. It's in there competing for the longest name. Paraparadichlordiethylchloramine (phonetic) is the name for DDT. But yes. So we have to keep those -- (inaudible) --

MS. WILLIAMS: -- (inaudible) -- say them all.

MR. McNEIL: Thank you.

CHAIRMAN SELCH: As usual, Rod, it doesn't look like you have anything -- (inaudible -- right now.

MR. McNEIL: Fantastic.

CHAIRMAN SELCH: Well, I don't see anyone in the gallery, so I'm assuming there is going to be no public comment, so that brings us to our agenda items for our next meeting, and I think -- is that November 4th, Bob? Is that the right date?

MR. BUKANTIS: November 3rd, Thursday.

CHAIRMAN SELCH: It looks like we've got a bunch of potential ones. Do you have anything for sure?

MR. BUKANTIS: Yes. If for the only --

expecting DEQ7 to come back complete, that's an action item -- (inaudible) -- in December. I think Jenny may have some permitting things as well for the next meeting. We'll also want to pick a chairperson for next year.

CHAIRMAN SELCH: Make sure Dude shows up at that one.

MR. BUKANTIS: I can't imagine him being nominated.

CHAIRMAN SELCH: I'll work on it.

MR. BUKANTIS: And then we'll also want pick the dates for next year, and usual suspects for -- (inaudible) -- So we've got some draft changes to subchapter six water quality standards as well. So --

CHAIRMAN SELCH: (Inaudible)

MR. BUKANTIS: (Inaudible)

CHAIRMAN SELCH: Sounds good. Okay. I suppose we'll be working on that over the next year.

MS. WILLIAMS: I have a question when you're done.

CHAIRMAN SELCH: I'm done.

MS. WILLIAMS: Bear with me. Tell me you want to go if this isn't interesting. But I

was on a tour up to Williston, North Dakota, it was an oil economy kind of tour, and the water was real high when we were out there, and there were actually oil rigs that were not submerged entirely. And I'm not sure if they were in North Dakota or Montana.

But I was curious. Do you know whether DEQ or whomever allows oil rigs in the flood plain?

MR. BUKANTIS: I'm not sure. I guess that's the Board of Oil and Gas. I think where we get involved in oil and gas development is when it's discharging -- (inaudible) -- to state waters.

MS. WILLIAMS: Okay. They were operating, and apparently they couldn't get in there to offload the oil because of the water. It looked like it would be something we wouldn't want to have happen. Anyway thank you. I just wanted to -- my curiosity.

CHAIRMAN SELCH: Well, I guess if we don't have any other comments or anything, otherwise motion to adjourn.

MS. WILLIAMS: Salute.

MR. SALLEY: Second.

(The proceedings were concluded)

* * * * *

C E R T I F I C A T E

STATE OF MONTANA)
: SS.
COUNTY OF LEWIS AND CLARK)

I, LAURIE CRUTCHER, RPR, Court Reporter, Notary Public in and for the County of Lewis and Clark, State of Montana, do hereby certify:

That the foregoing proceedings were transcribed from an audio recording, and that the foregoing -161- pages contain a true record of the proceedings to the best of my ability.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this _____ day of _____, 2011.

_____
LAURIE CRUTCHER, RPR
Court Reporter - Notary Public
My commission expires
March 9, 2012.

F

I

T